

- NOTES:**
- PROPERTY OWNERS: GINGUITE, LLC  
PO BOX 90  
MILL DEVAL HILLS, NC 27948
  - PROPERTY IDENTIFICATION: 6195 N. CROATAN HIGHWAY  
SOUTHERN SHORES, 27949  
PID#: 022519064  
PIN#: 986606491459
  - LOT AREA = 303,239.7 SQ.FT./6.96 ACRES  
NET AREA (NOT INCLUDING SURFACE WATER & COASTAL WETLANDS) = 198,177.73 SF / 4.55 AC. (AREAS BY COORDINATE METHOD.)
  - ZONING CLASSIFICATION: C (GENERAL COMMERCIAL) AND A SMALL PORTION OF R-1
  - REFERENCES: D.B. 1960, PG. 0120
  - THIS IS NOT A BOUNDARY SURVEY. BOUNDARY AND EXISTING FEATURES INFORMATION BASED ON P.C. F. SL. 413 & 414, P.C. E. PG. 228 AND FIELD SURVEY DATA COLLECTED BY QUIBLE & ASSOCIATES. ALL DATA COLLECTED ON 06/04/14, 06/22/17, 09/22/22 & 10/04/22.
  - VERTICAL DATUM NAVD 1988 / HORIZONTAL DATUM NAVD 1983 (2011).
  - PROPERTY IS LOCATED IN NFPP FLOOD ZONES AS SHOWN AND SUBJECT TO CHANGES BY FEMA. BASED ON COMMUNITY CID NO. 370430; PANEL 9866; SUFFIX K. (MAP NUMBER 3720986600K) EFFECTIVE DATE: 06/19/2020.
  - EXISTING LOT COVERAGE:  
EXISTING:  
ASPHALT.....2,115 SF  
GRAVEL.....2,507 SF (TO BE REMOVED)  
TOTAL.....4,622 SF (2.0%)
  - SETBACKS SHOWN ARE PER SOUTHERN SHORES AND DO NOT REFLECT ANY RESTRICTIVE COVENANTS THAT MAY EXIST.
  - PROJECT SCOPE: PERMITTING AND CONSTRUCTION A MIXED-USE GROUP DEVELOPMENT OF COMMERCIAL AND RESIDENTIAL BUILDINGS INCLUDING WITH ASSOCIATED PARKING, STORMWATER, UTILITIES & IMPROVEMENTS.
  - MAXIMUM BUILDING HEIGHT SHALL BE 35 FEET, MEASURED FROM THE AVERAGE EXISTING, UNDISTURBED GRADE AT THE BUILDING CORNERS. IF THE AVERAGE OF THE EXISTING, UNDISTURBED GRADE AT THE CORNERS OF THE BUILDING IS LESS THAN EIGHT FEET ABOVE MEAN SEA LEVEL, THE MAXIMUM BUILDING HEIGHT MAY BE MEASURED FROM EIGHT FEET ABOVE MEAN SEA LEVEL.
  - WATER SUPPLY PER DARE COUNTY. WATER CONNECTION MUST BE MADE IN ACCORDANCE WITH DARE COUNTY SPECIFICATIONS AND SHALL BE PERFORMED BY A LICENSED WATER UTILITY CONTRACTOR. NOTIFY COUNTY PRIOR TO INSTALLATION.
  - ALL UTILITIES TO BE PLACED UNDERGROUND UNLESS OTHERWISE NOTED.
  - PRIOR TO LAND DISTURBANCE, A STATE APPROVED SOIL EROSION AND SEDIMENTATION CONTROL PERMIT IS REQUIRED.
  - EXISTING VEGETATION TO BE PRESERVED WHERE POSSIBLE.
  - THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT ALL PROPERTY MONUMENTS DURING CONSTRUCTION. DISTURBED OR REMOVED PROPERTY MONUMENTS SHALL BE REPLACED BY A NORTH CAROLINA LICENSED PROFESSIONAL LAND SURVEYOR.
  - ALL WORK WITHIN THE NC DOT RIGHT-OF-WAY REQUIRES AN APPROVED NC DOT RIGHT-OF-WAY ENCROACHMENT AGREEMENT.
  - A STATE HIGH DENSITY STORMWATER PERMIT IS REQUIRED IN ADVANCE OF ANY ONSITE DISTURBANCE.
  - THE ENTIRE SITE WILL BE IN FULL COMPLIANCE WITH ALL APPLICABLE NFPA REGULATIONS PERTAINING TO FIRE PROTECTION INCLUDING BUT NOT LIMITED TO NFPA 30 AS WELL AS VOLUME V OF THE NC STATE BUILDING CODE.
  - BUILDING CONSTRUCTION TO CONFORM TO 2018 NC FIRE PREVENTION CODE OR LATEST EDITION.
  - THE LOCATION, DIMENSIONS, AND ELEVATION OF EXISTING UTILITIES SHOWN ARE BASED ON THE BEST AVAILABLE DATA AND ARE APPROXIMATE. THE CONTRACTOR SHALL VERIFY ALL DATA IN THE FIELD PRIOR TO CONSTRUCTION TO HIS/HER OWN SATISFACTION. THE CONTRACTOR SHALL PERFORM ANY TEST PIT WORK OR PROVIDE LOCATION SERVICES AS REQUIRED TO AVOID CONFLICTS WITH EXISTING UTILITIES. CONTACT NORTH CAROLINA ONE-CALL AT TELEPHONE NO. 1-800-632-4949, 48 HOURS PRIOR TO PERFORMING ANY EXCAVATION TO HAVE UTILITIES MARKED.
  - THE CONTRACTOR SHALL PROVIDE SMOOTH TRANSITIONS FROM PROPOSED FEATURES TO EXISTING FEATURES AS NECESSARY.
  - THE CONTRACTOR SHALL SEAL THE EDGE OF EXISTING ASPHALT PAVEMENT WITH TACK COAT IN ACCORDANCE WITH THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS WHERE NEW PAVEMENT JOINS EXISTING PAVEMENT.
  - ALL PAVEMENT JOINTS SHALL BE SAW-CUT PRIOR TO PAVING TO PROVIDE A DURABLE AND UNIFORM JOINT.
  - PROOF ROLL ALL NEW PAVED AREAS. NOTIFY OWNER AND ENGINEER OF ANY UNACCEPTABLE AREAS.
  - A TYPE C BUFFER IS REQUIRED ALONG PUBLIC & PRIVATE RIGHT OF WAYS.
  - THERE ARE NO KNOWN JURISDICTIONAL DETERMINATIONS FROM USACE ON THE SUBJECT PROPERTY.

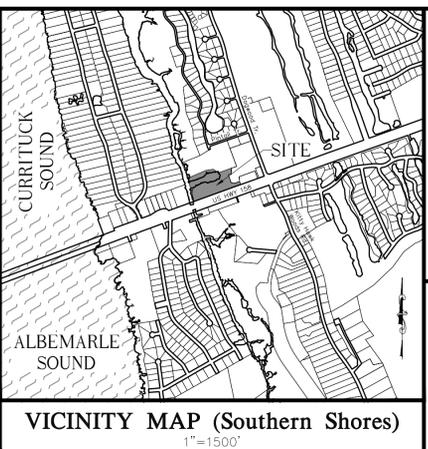
**DEMOLITION NOTES:**

- CONTRACTOR SHALL LOCATE EXISTING UNDERGROUND SERVICES - TO INCLUDE BUT NOT LIMITED TO ELECTRIC, CABLE, TELEPHONE, GAS, SANITARY SEWER AND WATER - AND SHALL COORDINATE PROPER PROTECTION AND/OR RELOCATE WITH APPROPRIATE OWNER/UTILITY COMPANY.
- CONTRACTOR SHALL WALK THE SITE AND BE FAMILIAR WITH THE SCOPE OF DEMOLITION REQUIRED. ALL DEMOLITION WORK REQUIRED TO CONSTRUCT NEW IMPROVEMENTS WILL BE PERFORMED BY THE CONTRACTOR AND BE UNCLASSIFIED EXCAVATION.
- DEMOLITION SHALL INCLUDE BUT IS NOT LIMITED TO THE EXCAVATION, HAULING AND OFFSITE DISPOSAL OF CONCRETE CURBS AND GUTTERS, BITUMINOUS CONCRETE PAVEMENTS AND ALL MATERIALS OR VEGETATION CLEARED AND STRIPPED TO THE EXTENT NECESSARY FOR THE INSTALLATION OF NEW IMPROVEMENTS AND WITHIN THE LIMITS OF CLEARING AND GRADING. COORDINATE WITH APPROPRIATE DRAWINGS.
- THE CONTRACTOR SHALL PROTECT ALL PROPERTY AND STRUCTURES AND UTILITIES ON THE PROPERTY NOT TO BE DEMOLISHED. DAMAGE TO THE PROPERTY DUE TO THE CONTRACTOR'S ACTIVITIES SHALL BE REPAIRED IN KIND BY THE CONTRACTOR AT NO COST TO THE OWNER.
- ALL EXISTING IMPROVEMENTS INDICATED OR REQUIRED TO BE DEMOLISHED SHALL INCLUDE REMOVAL FROM PROJECT AREA.
- EXISTING PAVEMENT, CURB AND GUTTER, LIGHTS, FENCES, TREE/VEGETATION AND UTILITIES NOT INTENDED FOR DEMOLITION SHALL BE MAINTAINED, PROTECTED, AND UNDISTURBED DURING DEMOLITION. CONTRACTOR SHALL COORDINATE THE REMOVAL OF BITUMINOUS CONCRETE PAVEMENTS AND CURB AND GUTTER WITH THE SITE PLAN.
- SMOOTH SAW CUT OF EXISTING PAVEMENTS, CURBS AND GUTTERS AND GUTTERS TO BE DEMOLISHED SHALL BE PROVIDED.
- ALL DEMOLITION WORK SHALL BE DONE IN STRICT ACCORDANCE WITH FEDERAL, STATE AND LOCAL LAWS AS WELL AS OSHA REGULATIONS.
- CONTRACTOR'S ACTIVITIES SHALL NOT IMPERE USAGE OR INGRESS/EGRESS TO ADJACENT PROPERTIES. COORDINATE WITH OWNER MAINTENANCE OF TRAFFIC/PEDESTRIAN CIRCULATION DURING CONSTRUCTION.
- MAINTAIN POSITIVE DRAINAGE AWAY FROM BUILDINGS AT ALL TIMES DURING DEMOLITION.
- A DEMOLITION PERMIT MUST BE OBTAINED FROM THE TOWN OF SOUTHERN SHORES PRIOR TO DEMOLITION WORK.

**LEGEND**

	EXISTING ASPHALT PAVEMENT		PROPOSED DEMOLITION
	EXISTING GRAVEL		EXISTING WETLANDS
	EXISTING WATER		
	CALC POINT/SET IRON ROD		
	EX. IRON ROD		
	EX. MAG NAIL		
	EX. CONCRETE MONUMENT		
	EX. UTILITY POLE		
	EX. FIRE HYDRANT		
	EX. TELEPHONE PEDESTAL		
	EX. CONTOUR		
	EX. WATER LINE		
	EX. OVERHEAD UTILITIES		
	EX. DITCH		
	EX. STORM PIPE		

**811**  
Know what's below.  
Call before you dig.



NC License# C-028  
SINCE 1959

**Quible & Associates, P.C.**  
CONSTRUCTION SURVEYING  
ENVIRONMENTAL SCIENCES SURVEYING  
ENGINEERING/SURVEYING NOT OFFERED AT BLACK W/IN OFFICE\*\*

8486 KAMATITE HWY  
BLACK MOUNTAIN, NC 28711  
Phone: (252) 891-8147  
Fax: (252) 891-8147  
www.quible.com

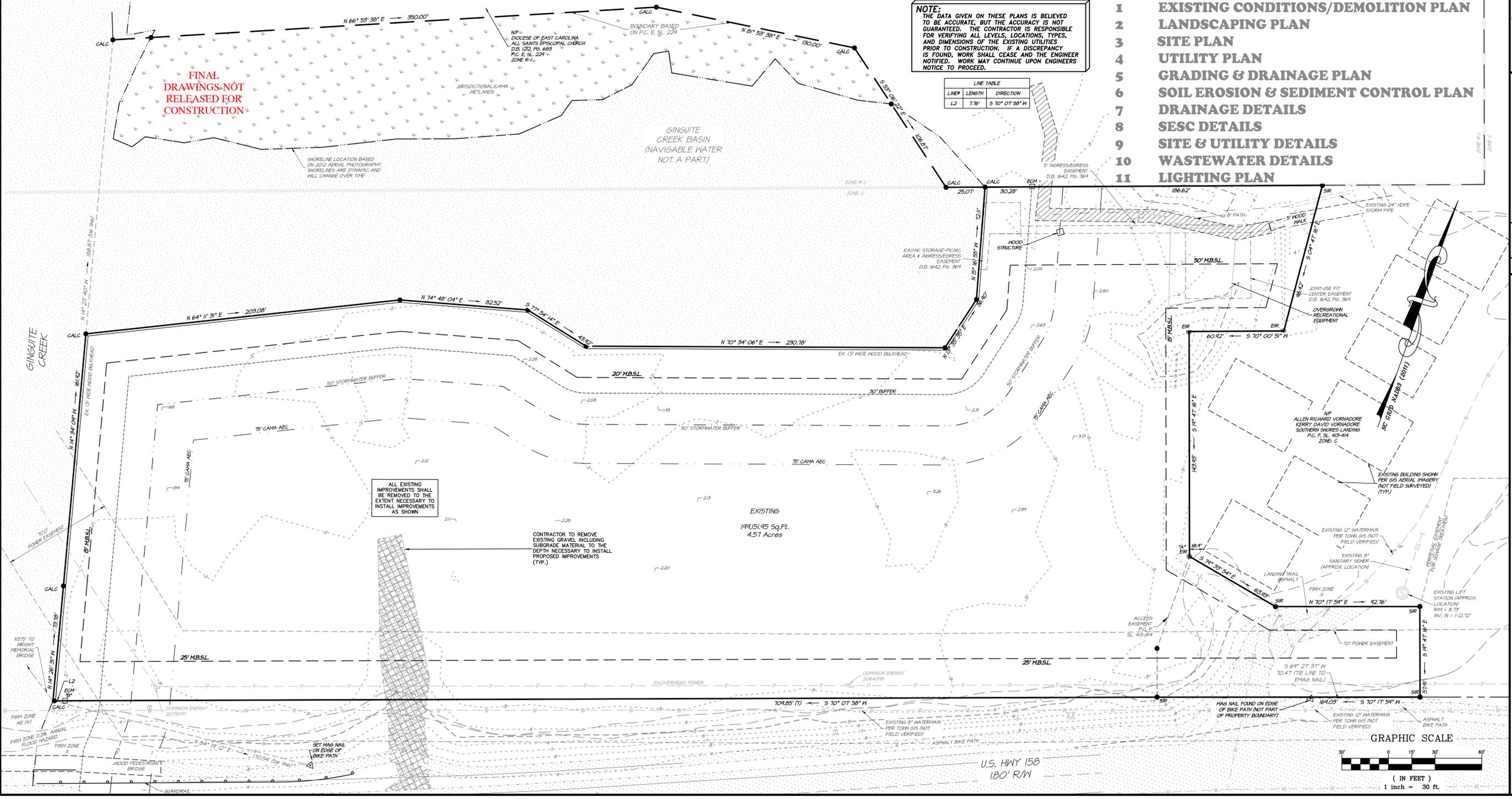
PROFESSIONAL SURVEYOR  
No. 043652  
ALEX M. SAUNDERS  
CERTIFICATION

**SHEET INDEX**

- EXISTING CONDITIONS/DEMOLITION PLAN
- LANDSCAPING PLAN
- SITE PLAN
- UTILITY PLAN
- GRADING & DRAINAGE PLAN
- SOIL EROSION & SEDIMENT CONTROL PLAN
- DRAINAGE DETAILS
- SESC DETAILS
- SITE & UTILITY DETAILS
- WASTEWATER DETAILS
- LIGHTING PLAN

**NOTE:**  
THE DATA GIVEN ON THESE PLANS IS BELIEVED TO BE ACCURATE, BUT THE ACCURACY IS NOT GUARANTEED. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL LEVELS, LOCATIONS, TYPES, AND DIMENSIONS OF THE EXISTING UTILITIES PRIOR TO CONSTRUCTION. IF A DISCREPANCY IS FOUND, WORK SHALL CEASE AND THE ENGINEER NOTIFIED. WORK MAY CONTINUE UPON ENGINEERS NOTICE TO PROCEED.

LINE#	LENGTH	DIRECTION
L2	7.76'	S 70° 07' 58" W



NO. DATE REVISIONS

NO.	DATE	PER TOWN COMMENTS	PER TOWN COMMENTS
1	06/05/23		
2	07/28/23		
3	11/10/23		

**EXISTING CONDITIONS/DEMOLITION PLAN**

PROJECT NO. P14064  
DESIGNED BY CMS  
DRAWN BY JJC  
CHECKED BY CMS  
ISSUE DATE 6/1/23

SHEET NO. 1 OF 11 SHEETS

ATLANTIC TOWNSHIP DARE COUNTY NORTH CAROLINA  
GINGUITE CREEK  
6195 N. CROATAN HIGHWAY

11/10/2023 12:03 PM  
 C:\Users\jcc\OneDrive\Documents\Projects\14064\14064.dwg  
 11/10/2023 12:03 PM

**NOTES:**

- PROPERTY OWNERS: GINGUITE, LLC  
PO BOX 50  
KILL DEVIL HILLS, NC 27948
- PROPERTY IDENTIFICATION: 6195 N. CROATAN HIGHWAY  
SOUTHERN SHORES, 27949  
PID#: 022519064  
PIN#: 9866064914591
- LOT AREA = 303,239.7 SQ.FT./6.96 ACRES  
NET AREA (NOT INCLUDING SURFACE WATER & COASTAL WETLANDS) = 198,177.73 SF / 4.55 AC. (AREAS BY COORDINATE METHOD.)
- ZONING CLASSIFICATION: C (GENERAL COMMERCIAL) AND A SMALL PORTION OF R-1
- REFERENCES: D.B. 1960, PG. 0120
- THIS IS NOT A BOUNDARY SURVEY. BOUNDARY AND EXISTING FEATURES INFORMATION BASED ON P.C. F, SL. 413 & 414; P.C. E, PG. 229 AND FIELD SURVEY DATA COLLECTED BY QUILBE & ASSOCIATES. ALL DATA COLLECTED ON 06/04/14, 06/22/17, 09/22/22 & 10/04/22.
- VERTICAL DATUM NAVD 1988 / HORIZONTAL DATUM NAVD 1983 (2011).
- PROPERTY IS LOCATED IN NFIP FLOOD ZONES AS SHOWN AND SUBJECT TO CHANGES BY FEMA. BASED ON COMMUNITY CID NO. 370430; PANEL 9866; SUFFIX K. (MAP NUMBER 3720986600K) EFFECTIVE DATE: 06/19/2020.
- SETBACKS SHOWN ARE PER SOUTHERN SHORES AND DO NOT REFLECT ANY RESTRICTIVE COVENANTS THAT MAY EXIST.
- PROJECT SCOPE: PERMITTING AND CONSTRUCTION A MIXED-USE GROUP DEVELOPMENT OF COMMERCIAL AND RESIDENTIAL BUILDINGS INCLUDING WITH ASSOCIATED PARKING, STORMWATER, UTILITIES & IMPROVEMENTS.
- MAXIMUM BUILDING HEIGHT SHALL BE 35 FEET, MEASURED FROM THE AVERAGE EXISTING UNDISTURBED GRADE AT THE BUILDING CORNERS. IF THE AVERAGE OF THE EXISTING UNDISTURBED GRADE AT THE CORNERS OF THE BUILDING IS LESS THAN EIGHT FEET ABOVE MEAN SEA LEVEL, THE MAXIMUM BUILDING HEIGHT MAY BE MEASURED FROM EIGHT FEET ABOVE MEAN SEA LEVEL.
- THIS PLAN IS SUBJECT TO ANY FACTS, INCLUDING BUILDING SETBACK RESTRICTIONS, EASEMENTS, COVENANTS, ETC., THAT MAY BE REVEALED BY A FULL AND ACCURATE TITLE SEARCH.

**TREE PLANTING SUMMARY**

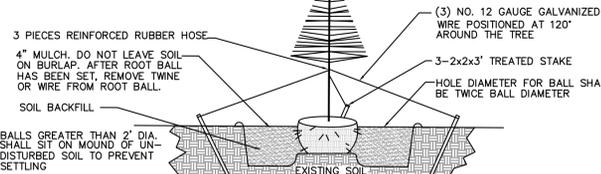
SYMBOL	QUANTITY	COMMON NAME	HEIGHT	SPREAD	MIN. SIZE @ PLANTING
🌳	4	BALD CYPRESS*	50' - 100'	20' - 30'	2" CAL. 8' HT.
🌳	4	EASTERN RED CEDAR*	30' - 40'	10' - 20'	2" CAL. 8' HT.
🌳	4	HONEYLOCUST*	50' - 75'	25' - 40'	2" CAL. 8' HT.
🌳	4	RED MAPLE*	40' - 50'	25' - 45'	2" CAL. 8' HT.
🌳	6	AMERICAN HOLLY*	15' - 30'	10' - 20'	1.5" CAL. 6' HT.
🌳	6	BLACK HAW*	12' - 15'	8' - 12'	1.5" CAL. 6' HT.
🌳	6	CRAPE MYRTLE*	15' - 30'	8' - 15'	1.5" CAL. 6' HT.
🌳	4	FLOWERING DOGWOOD*	15' - 30'	15' - 20'	1.5" CAL. 6' HT.
🌳	8	GLOSSY ABELIA**	3' - 6'	3' - 6'	3 GALLON
🌳	8	DWARF HORNED HOLLY**	3' - 4'	3' - 4'	3 GALLON
🌳	8	DWARF AZALEA**	3' - 6'	3' - 6'	3 GALLON

\* CANOPY AND UNDERSTORY TREE SPECIES MAY BE SUBSTITUTED WITH A SPECIES APPROVED BY THE TOWN OF SOUTHERN SHORES.  
\*\* COORDINATE INSTALLATION WITH OWNER. ORNAMENTAL SHRUB/GRASS SPECIES MAY BE SUBSTITUTED WITH A SPECIES APPROVED BY THE TOWN OF SOUTHERN SHORES.

LANDSCAPE PLAN TO DEMONSTRATE COMPLIANCE WITH TOWN BUFFER AND LANDSCAPE REQUIREMENTS ONLY. MORE DETAILED LANDSCAPING TO BE PROVIDED AT BUILDING PERMIT APPLICATION

**FINAL DRAWINGS-NOT RELEASED FOR CONSTRUCTION**

**FINAL DRAWINGS FOR PERMITTING ONLY**



**TREE PLANTING DETAIL**  
N.T.S.



**NOTE:**  
THE DATA GIVEN ON THESE PLANS IS BELIEVED TO BE ACCURATE, BUT THE ACCURACY IS NOT GUARANTEED. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL LEVELS, LOCATIONS, TYPES, AND DIMENSIONS OF THE EXISTING UTILITIES PRIOR TO CONSTRUCTION. IF A DISCREPANCY IS FOUND, WORK SHALL CEASE AND THE ENGINEER NOTIFIED. WORK MAY CONTINUE UPON ENGINEERS NOTICE TO PROCEED.

**LEGEND**

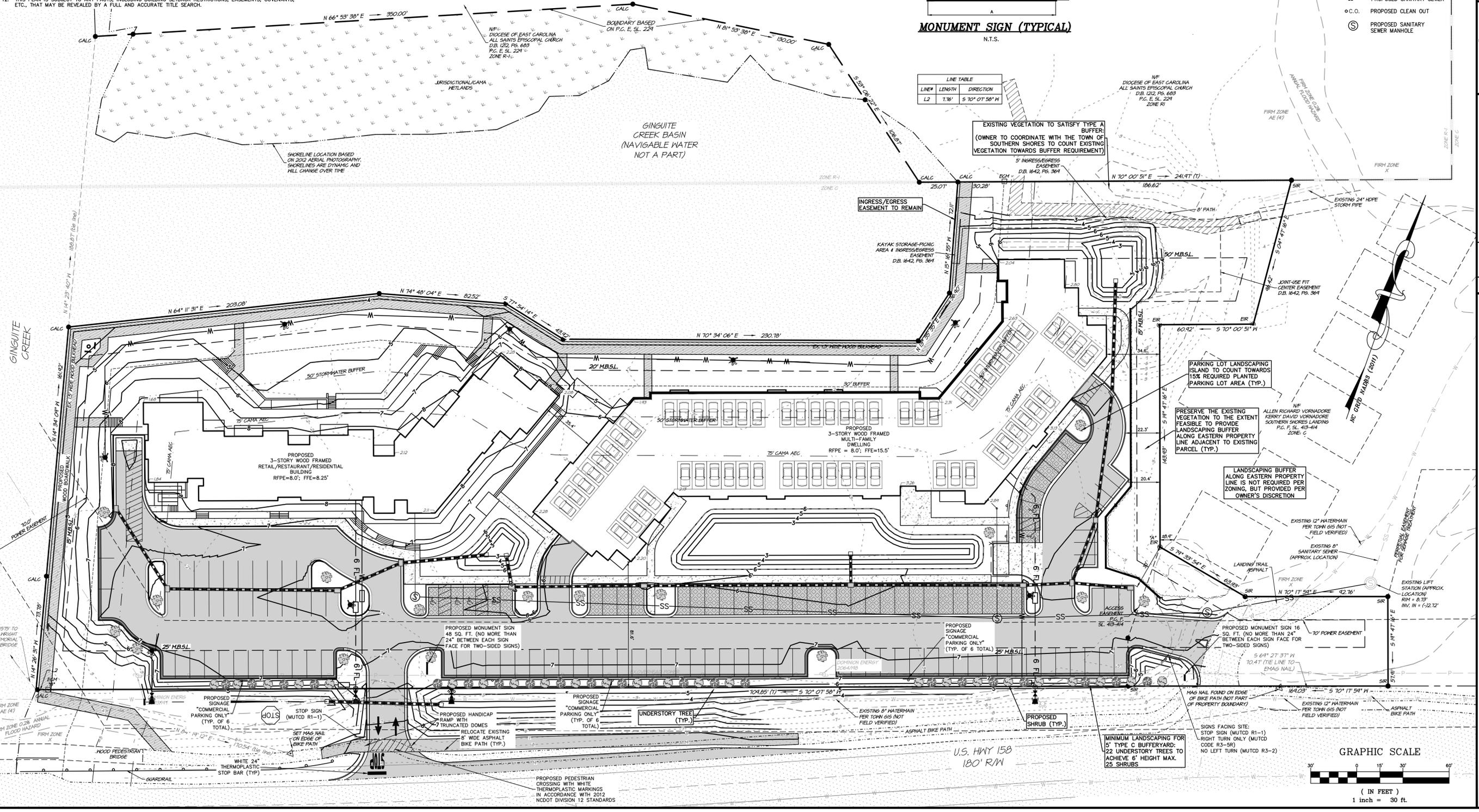
	EXISTING ASPHALT PAVEMENT		PROPOSED ASPHALT PAVEMENT
	EXISTING GRAVEL		PROPOSED CONCRETE PAVEMENT
	EXISTING WATER		PROPOSED GRAVEL
	CALC POINT/SET IRON ROD		PROPOSED OPEN SLOTTED WOOD DECKING
	EX. IRON ROD		PROPOSED STORM PIPE
	EX. MAG NAIL		PROPOSED STORM SEWER MANHOLE
	EX. CONCRETE MONUMENT		PROPOSED DROP INLET
	EX. UTILITY POLE		PROPOSED FIRE HYDRANT
	EX. FIRE HYDRANT		PROPOSED BENDS & TEES
	EX. TELEPHONE PEDESTAL		PROPOSED GATE VALVE
	EX. CONTOUR		PROPOSED FIRE DEPARTMENT CONNECTION
	EX. WATER LINE		PROPOSED WATER LINE
	EX. OVERHEAD UTILITIES		PROPOSED FIRE LINE
			PROPOSED SANITARY SEWER
			PROPOSED CLEAN OUT
			PROPOSED SANITARY SEWER MANHOLE

**MONUMENT SIGN (TYPICAL)**  
N.T.S.

LINE TABLE

LINE#	LENGTH	DIRECTION
L2	7.36'	S 10° 07' 58" N

NOTES:  
1. MONUMENT SIGNS ARE TWO-SIDED.  
2. NO MORE THAN 24" BETWEEN EACH SIGN FACE FOR TWO-SIDED SIGNS.



**Quible & Associates, P.C.**  
REGISTERED PROFESSIONAL ENGINEER  
SURVEYING  
ENVIRONMENTAL SCIENCES SURVEYING  
ENGINEERING/SURVEYING NOT OFFERED AT BLACK MOUNTAIN OFFICE  
8486 CAROLITE HWY  
BLACK MOUNTAIN, NC 28711  
Phone: (828) 659-8127  
Fax: (828) 659-1549  
www.quibleandassociates.com

**REVISIONS**

NO.	DATE	PER TOWN COMMENTS	PER TOWN COMMENTS
1	06/05/23		
2	07/28/23		
3	11/17/23		

**PROJECT NO. P14064**  
**DESIGNED BY CMS**  
**DRAWN BY JJC**  
**CHECKED BY CMS**  
**ISSUE DATE 6/1/23**

**SHEET NO. 2**  
OF 11 SHEETS

**LANDSCAPING PLAN**  
**GINGUITE CREEK**  
**6195 N. CROATAN HIGHWAY**  
NORTH CAROLINA  
DARE COUNTY  
ATLANTIC TOWNSHIP

**GRAPHIC SCALE**  
( IN FEET )  
1 inch = 30 ft



**NOTES:**

- PROPERTY OWNERS:  
GINGUITE, LLC  
PO BOX 90  
KILL DEVIL HILLS, NC 27948
- PROPERTY IDENTIFICATION:  
6195 N. CROATAN HIGHWAY  
SOUTHERN SHORES, 27949  
PID#: 022310064  
PIN#: 986606491459
- LOT AREA = 303,239.7 SQ.FT./6.96 ACRES  
NET AREA (NOT INCLUDING SURFACE WATER & COASTAL WETLANDS) = 198,177.73 SF / 4.55 AC. (AREAS BY COORDINATE METHOD.)
- ZONING CLASSIFICATION: C (GENERAL COMMERCIAL) AND A SMALL PORTION OF R-1
- REFERENCES: D.B. 1960, PG. 0120
- THIS IS NOT A BOUNDARY SURVEY. BOUNDARY AND EXISTING FEATURES INFORMATION BASED ON P.C. F. SL. 413 & 414; P.C. E. PG. 229 AND FIELD SURVEY DATA COLLECTED BY QUILBE & ASSOCIATES, ALL DATA COLLECTED ON 06/04/14, 06/22/17, 09/22/22 & 10/04/22.
- VERTICAL DATUM NAVD 1988 / HORIZONTAL DATUM NAVD 1983 (2011).
- PROPERTY IS LOCATED IN NFIP FLOOD ZONES AS SHOWN AND SUBJECT TO CHANGES BY FEMA, BASED ON COMMUNITY CID NO. 370430; PANEL 9866; SUFFIX K. (MAP NUMBER 372098660K) EFFECTIVE DATE: 06/19/2020.
- SETBACKS SHOWN ARE PER SOUTHERN SHORES AND DO NOT REFLECT ANY RESTRICTIVE COVENANTS THAT MAY EXIST.
- PROJECT SCOPE: PERMITTING AND CONSTRUCTION A MIXED-USE GROUP DEVELOPMENT OF COMMERCIAL AND RESIDENTIAL BUILDINGS INCLUDING WITH ASSOCIATED PARKING, STORMWATER, UTILITIES & IMPROVEMENTS.
- MAXIMUM BUILDING HEIGHT SHALL BE 35 FEET, MEASURED FROM THE AVERAGE EXISTING, UNDISTURBED GRADE AT THE BUILDING CORNERS. IF THE AVERAGE OF THE EXISTING, UNDISTURBED GRADE AT THE CORNERS OF THE BUILDING IS LESS THAN EIGHT FEET ABOVE MEAN SEA LEVEL, THE MAXIMUM BUILDING HEIGHT MAY BE MEASURED FROM EIGHT FEET ABOVE MEAN SEA LEVEL.

- WASTEWATER: WILL BE COLLECTED VIA GRAVITY AND CONVEYED INTO EXISTING CENTRAL SEWAGE INFRASTRUCTURE.  
RESIDENTIAL USE: (75 GPD/BR)\*(140) = 10,500 GPD  
RESTAURANT USE: (40 GPD/SEAT)\*(120 SEATS) = 4,800 GPD  
COMMERCIAL USE: (100 GPD/1,000 SF)\*(16,240 SF) = 1,624 GPD  
TOTAL = 16,924 GPD
- THIS PROPERTY IS ACCESSED BY US 158 PUBLIC RIGHT-OF-WAY.
- ALL UTILITIES TO BE PLACED UNDERGROUND UNLESS OTHERWISE NOTED.
- PRIOR TO LAND DISTURBANCE, A STATE APPROVED SOIL EROSION AND SEDIMENTATION CONTROL PERMIT IS REQUIRED.
- EXISTING VEGETATION TO BE PRESERVED WHERE POSSIBLE.
- THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT ALL PROPERTY MONUMENTS DURING CONSTRUCTION. DISTURBED OR REMOVED PROPERTY MONUMENTS SHALL BE REPLACED BY A NORTH CAROLINA LICENSED PROFESSIONAL LAND SURVEYOR.
- ALL WORK WITHIN THE NC DOT RIGHT-OF-WAY REQUIRES AN APPROVED NC DOT RIGHT-OF-WAY ENCROACHMENT AGREEMENT.
- A STATE HIGH DENSITY STORMWATER PERMIT IS REQUIRED IN ADVANCE OF ANY ONSITE DISTURBANCE.
- THE ENTIRE SITE WILL BE IN FULL COMPLIANCE WITH ALL APPLICABLE NFPA REGULATIONS PERTAINING TO FIRE PROTECTION INCLUDING BUT NOT LIMITED TO NFPA 30 AS WELL AS VOLUME V OF THE NC STATE BUILDING CODE.
- BUILDING CONSTRUCTION TO CONFORM TO 2018 NC FIRE PREVENTION CODE OR LATEST EDITION.
- THE LOCATION, DIMENSIONS, AND ELEVATION OF EXISTING UTILITIES SHOWN ARE BASED ON THE BEST AVAILABLE DATA AND ARE APPROXIMATE. THE CONTRACTOR SHALL VERIFY ALL DATA IN THE FIELD PRIOR TO CONSTRUCTION TO HIS/HER OWN SATISFACTION. THE CONTRACTOR SHALL PERFORM ANY TEST PIT WORK OR PROVIDE LOCATION SERVICES AS REQUIRED TO AVOID CONFLICTS WITH EXISTING UTILITIES. CONTACT NORTH CAROLINA ONE-CALL AT TELEPHONE NO. 1-800-632-4949, 48 HOURS PRIOR TO PERFORMING ANY EXCAVATION TO HAVE UTILITIES MARKED.

- THE CONTRACTOR SHALL PROVIDE SMOOTH TRANSITIONS FROM PROPOSED FEATURES TO EXISTING FEATURES AS NECESSARY.
- THE CONTRACTOR SHALL SEAL THE EDGE OF EXISTING ASPHALT PAVEMENT WITH TACK COAT IN ACCORDANCE WITH THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS WHERE NEW PAVEMENT JOINS EXISTING PAVEMENT.
- ALL PAVEMENT JOINTS SHALL BE SAW-CUT PRIOR TO PAVING TO PROVIDE A DURABLE AND UNIFORM JOINT.
- PROOF ROLL ALL NEW PAVED AREAS. NOTIFY OWNER AND ENGINEER OF ANY UNACCEPTABLE AREAS.
- A TYPE C BUFFER IS REQUIRED ALONG PUBLIC & PRIVATE RIGHT OF WAYS.
- THIS PLAN SET TO BE UTILIZED FOR THE INSTALLATION OF SITE LAYOUT IMPROVEMENTS INCLUDING, BUT NOT LIMITED TO, GRADING & DRAINAGE, INSTALLATION OF SEDIMENT CONTROL MEASURES, WASTEWATER, AND WATER SYSTEM. FOR BUILDING DESIGN AND ASSOCIATED PLUMBING, SEE APPROPRIATE SEPARATE PLANS.

**LEGEND**

	EXISTING ASPHALT PAVEMENT		PROPOSED ASPHALT PAVEMENT
	EXISTING GRAVEL		PROPOSED CONCRETE PAVEMENT
	EXISTING WATER		PROPOSED GRAVEL
	CALC POINT/SET IRON ROD		PROPOSED OPEN SLOTTED WOOD DECKING
	EX. IRON ROD		PROPOSED PERMEABLE PAVEMENT
	EX. MAG NAIL		PROPOSED STORM PIPE
	EX. CONCRETE MONUMENT		PROPOSED STORM SEWER MANHOLE
	EX. UTILITY POLE		PROPOSED DROP INLET
	EX. FIRE HYDRANT		PROPOSED FIRE HYDRANT
	EX. TELEPHONE PEDESTAL		PROPOSED BENDS & TEES
	EX. CONTOUR		PROPOSED GATE VALVE
	EX. WATER LINE		PROPOSED FIRE DEPARTMENT CONNECTION
	EX. OVERHEAD UTILITIES		PROPOSED WATERLINE
			PROPOSED FIRE LINE
			PROPOSED SANITARY SEWER
			PROPOSED CLEAN OUT
			PROPOSED SANITARY SEWER MANHOLE

**FINAL DRAWINGS NOT RELEASED FOR CONSTRUCTION**

**NOTE:**  
THE DATA GIVEN ON THESE PLANS IS BELIEVED TO BE ACCURATE, BUT THE ACCURACY IS NOT GUARANTEED. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL LEVELS, LOCATIONS, TYPES, AND DIMENSIONS OF THE EXISTING UTILITIES PRIOR TO CONSTRUCTION. IF A DISCREPANCY IS FOUND, WORK SHALL CEASE AND THE ENGINEER NOTIFIED. WORK MAY CONTINUE UPON ENGINEERS NOTICE TO PROCEED.

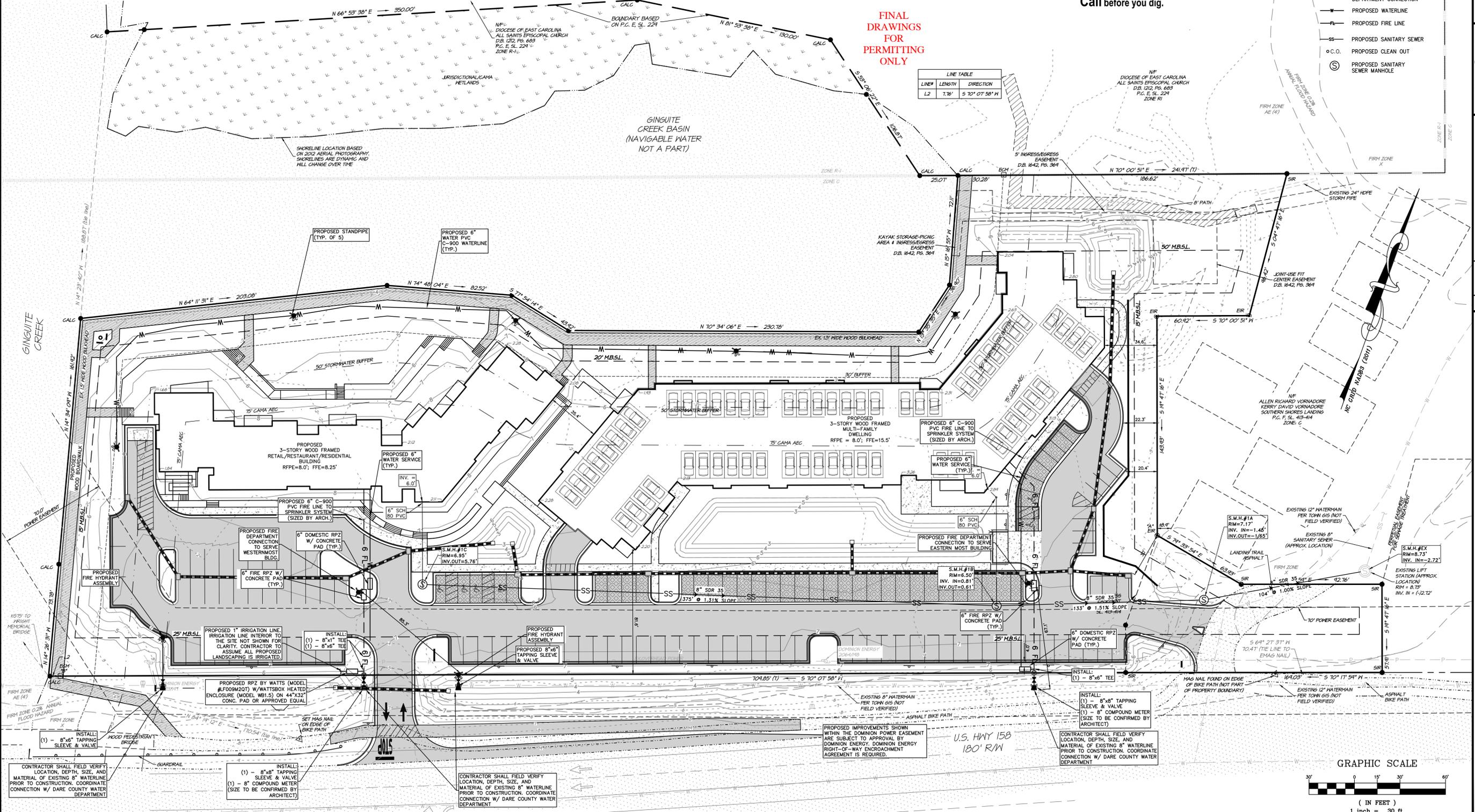


Know what's below.  
Call before you dig.

**FINAL DRAWINGS FOR PERMITTING ONLY**

**LINE TABLE**

LINE	LENGTH	DIRECTION
L2	1.76'	S 70° 07' 58" W



**UTILITY PLAN**  
**GINGUITE CREEK**  
**6195 N. CROATAN HIGHWAY**  
NORTH CAROLINA  
DARE COUNTY  
ATLANTIC TOWNSHIP

**LEGEND**

**811**  
Know what's below.  
Call before you dig.

**NOTE:**  
THE DATA GIVEN ON THESE PLANS IS BELIEVED TO BE ACCURATE, BUT THE ACCURACY IS NOT GUARANTEED. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL LEVELS, LOCATIONS, TYPES, AND DIMENSIONS OF THE EXISTING UTILITIES PRIOR TO CONSTRUCTION. IF A DISCREPANCY IS FOUND, WORK SHALL CEASE AND THE ENGINEER NOTIFIED. WORK MAY CONTINUE UPON ENGINEERS NOTICE TO PROCEED.

**FINAL DRAWINGS NOT RELEASED FOR CONSTRUCTION**

**FINAL DRAWINGS FOR PERMITTING ONLY**

**LINE TABLE**

LINE	LENGTH	DIRECTION
L2	1.76'	S 70° 07' 58" W

**LEGEND**

	EXISTING ASPHALT PAVEMENT		PROPOSED ASPHALT PAVEMENT
	EXISTING GRAVEL		PROPOSED CONCRETE PAVEMENT
	EXISTING WATER		PROPOSED GRAVEL
	CALC POINT/SET IRON ROD		PROPOSED OPEN SLOTTED WOOD DECKING
	EX. IRON ROD		PROPOSED PERMEABLE PAVEMENT
	EX. MAG NAIL		PROPOSED STORM PIPE
	EX. CONCRETE MONUMENT		PROPOSED STORM SEWER MANHOLE
	EX. UTILITY POLE		PROPOSED DROP INLET
	EX. FIRE HYDRANT		PROPOSED FIRE HYDRANT
	EX. TELEPHONE PEDESTAL		PROPOSED BENDS & TEES
	EX. CONTOUR		PROPOSED GATE VALVE
	EX. WATER LINE		PROPOSED FIRE DEPARTMENT CONNECTION
	EX. OVERHEAD UTILITIES		PROPOSED WATERLINE
			PROPOSED FIRE LINE
			PROPOSED SANITARY SEWER
			PROPOSED CLEAN OUT
			PROPOSED SANITARY SEWER MANHOLE

**REVISIONS**

NO.	DATE	PER TOWN COMMENTS	PER TOWN COMMENTS
1	06/05/23		
2	07/28/23		
3	11/10/23		

**PROJECT NO. P14064**  
**DESIGNED BY CMS**  
**DRAWN BY JJC**  
**CHECKED BY CMS**  
**ISSUE DATE 6/1/23**

**SHEET NO. 4**  
**OF 11 SHEETS**

**GRAPHIC SCALE**  
1 inch = 30 ft

**NOTES:**

- PROPERTY OWNERS: GINGUITE, LLC  
PO BOX 90  
KILL DEVIL HILLS, NC 27948
- PROPERTY IDENTIFICATION: 6195 N. CROATAN HIGHWAY  
SOUTHERN SHORES, 27949  
PID#: 022510064  
PIN#: 986606491459
- LOT AREA = 303,239.7 SQ.FT./6.96 ACRES  
NET AREA (NOT INCLUDING SURFACE WATER & COASTAL WETLANDS) = 198,177.73 SF / 4.55 AC. (AREAS BY COORDINATE METHOD.)
- ZONING CLASSIFICATION: C (GENERAL COMMERCIAL) AND A SMALL PORTION OF R-1
- REFERENCES: D.B. 1960, PG. 0120
- THIS IS NOT A BOUNDARY SURVEY. BOUNDARY AND EXISTING FEATURES INFORMATION BASED ON P.C. F. SL. 413 & 414; P.C. E. PG. 229 AND FIELD SURVEY DATA COLLECTED BY QUILBE & ASSOCIATES. ALL DATA COLLECTED ON 06/04/14, 06/22/17, 09/22/22 & 10/04/22.
- VERTICAL DATUM NAVD 1988 / HORIZONTAL DATUM NAVD 1983 (2011).
- PROPERTY IS LOCATED IN NFIP FLOOD ZONES AS SHOWN AND SUBJECT TO CHANGES BY FEMA. BASED ON COMMUNITY ID NO. 370430; PANEL 9866; SUFFIX K. (MAP NUMBER 3720986600K) EFFECTIVE DATE: 06/19/2020.
- SETBACKS SHOWN ARE PER SOUTHERN SHORES AND DO NOT REFLECT ANY RESTRICTIVE COVENANTS THAT MAY EXIST.
- PROJECT SCOPE: PERMITTING AND CONSTRUCTION OF A MIXED-USE GROUP DEVELOPMENT OF COMMERCIAL AND RESIDENTIAL BUILDINGS INCLUDING WITH ASSOCIATED PARKING, STORMWATER, UTILITIES & IMPROVEMENTS.
- MAXIMUM BUILDING HEIGHT SHALL BE 35 FEET, MEASURED FROM THE AVERAGE EXISTING UNDISTURBED GRADE AT THE BUILDING CORNERS. IF THE AVERAGE OF THE EXISTING UNDISTURBED GRADE AT THE CORNERS OF THE BUILDING IS LESS THAN EIGHT FEET ABOVE MEAN SEA LEVEL, THE MAXIMUM BUILDING HEIGHT MAY BE MEASURED FROM EIGHT FEET ABOVE MEAN SEA LEVEL.

- THIS PROPERTY IS ACCESSED BY US 158 PUBLIC RIGHT-OF-WAY.
- ALL UTILITIES TO BE PLACED UNDERGROUND UNLESS OTHERWISE NOTED.
- PRIOR TO LAND DISTURBANCE, A STATE APPROVED SOIL EROSION AND SEDIMENTATION CONTROL PERMIT IS REQUIRED.
- EXISTING VEGETATION TO BE PRESERVED WHERE POSSIBLE.
- THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT ALL PROPERTY MONUMENTS DURING CONSTRUCTION. DISTURBED OR REMOVED PROPERTY MONUMENTS SHALL BE REPLACED BY A NORTH CAROLINA LICENSED PROFESSIONAL LAND SURVEYOR.
- ALL WORK WITHIN THE NC DOT RIGHT-OF-WAY REQUIRES AN APPROVED NC DOT RIGHT-OF-WAY ENCROACHMENT AGREEMENT.
- A STATE HIGH DENSITY STORMWATER PERMIT IS REQUIRED IN ADVANCE OF ANY ONSITE DISTURBANCE.
- THE LOCATION, DIMENSIONS, AND ELEVATION OF EXISTING UTILITIES SHOWN ARE BASED ON THE BEST AVAILABLE DATA AND ARE APPROXIMATE. THE CONTRACTOR SHALL VERIFY ALL DATA IN THE FIELD PRIOR TO CONSTRUCTION TO HIS/HER OWN SATISFACTION. THE CONTRACTOR SHALL PERFORM ANY TEST PIT WORK OR PROVIDE LOCATION SERVICES AS REQUIRED TO AVOID CONFLICTS WITH EXISTING UTILITIES. CONTACT NORTH CAROLINA ONE-CALL AT TELEPHONE NO. 1-800-632-4949, 48 HOURS PRIOR TO PERFORMING ANY EXCAVATION TO HAVE UTILITIES MARKED.
- THE CONTRACTOR SHALL PROVIDE SMOOTH TRANSITIONS FROM PROPOSED FEATURES TO EXISTING FEATURES AS NECESSARY.
- THE CONTRACTOR SHALL SEAL THE EDGE OF EXISTING ASPHALT PAVEMENT WITH TACK COAT IN ACCORDANCE WITH THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS WHERE NEW PAVEMENT JOINS EXISTING PAVEMENT.
- ALL PAVEMENT JOINTS SHALL BE SAW-CUT PRIOR TO PAVING TO PROVIDE A DURABLE AND UNIFORM JOINT.
- PROOF ROLL ALL NEW PAVED AREAS. NOTIFY OWNER AND ENGINEER OF ANY UNACCEPTABLE AREAS.
- THIS PLAN SET TO BE UTILIZED FOR THE INSTALLATION OF SITE LAYOUT IMPROVEMENTS INCLUDING, BUT NOT LIMITED TO, GRADING & DRAINAGE, INSTALLATION OF SEDIMENT CONTROL MEASURES, WASTEWATER, AND WATER SYSTEM. FOR BUILDING DESIGN AND ASSOCIATED PLUMBING, SEE APPROPRIATE SEPARATE PLANS.
- ALL PIPES TO BE CLASS IV REINFORCED CONCRETE, UNLESS OTHERWISE NOTED.
- ALL REINFORCED CONCRETE PIPES (RCP) TO HAVE END TREATMENTS, EITHER FLARED END SECTIONS (FES) OR END WALLS. END WALLS TO BE CONSTRUCTED AS PER NDOT STANDARD 838.01.

**PERMANENT VEGETATION**

SEEDING DATES: APRIL 1 - AUGUST 31:

SEED MIXTURE	APPLICATION RATES/ACRE
REBEL II FESCUE	130 LBS.
COMMON BERMUDA "SAHARA" (HULLED)	215 LBS.

SEEDING DATES: SEPT. 1 - MARCH 31:

SEED MIXTURE	APPLICATION RATES/ACRE
REBEL II FESCUE	250 LBS.
COMMON BERMUDA "SAHARA" (UNHULLED)	215 LBS.

**SEEDBED PREPARATION:**  
LOOSEN SOILS TO A DEPTH OF 6-8 INCHES USING A RIPPER, HARROW, OR CHISEL PLOW. BREAK UP CLODS, REMOVE UNACCEPTABLE GROWTH (STICKS, ROOTS), STONES (>3"), AND OTHER MATERIALS, AND WORK THE TOP 3-4 INCHES OF THE SOIL INTO A SEEDBED. THE AREA TO BE SEEDBED SHALL BE RE-COMPACTED UTILIZING A CULTIPACKER ROLLER AND A SMOOTH EVEN SOIL SURFACE WITH A LOOSE, UNIFORM FINE TEXTURE SHALL BE THE FINISHED GRADE.

**SOIL AMENDMENTS:**  
OBTAIN A SOIL TEST TO DETERMINE APPLICATION RATES AND FOLLOW RECOMMENDATIONS OF SOIL TESTS. WHEN A SOIL TEST IS NOT POSSIBLE, APPLY 3,000 LB/ACRE GROUND AGRICULTURAL LIMESTONE AND 1,000 LB/ACRE 10-10-10 STARTER FERTILIZER.

**MULCHING:**  
APPLY 4,000 LB/ACRE GRAIN STRAW OR EQUIVALENT COVER OF ANOTHER SUITABLE MULCH. ANCHOR STRAW BY TACKING WITH ASPHALT, NETTING, ROWING OR BY CRIMPING WITH A MULCH ANCHORING TOOL.

**MAINTENANCE:**  
SATISFACTORY STABILIZATION AND EROSION CONTROL REQUIRES A COMPLETE VEGETATIVE COVER. EVEN SMALL BREACHES IN VEGETATIVE COVER CAN EXPAND RAPIDLY AND, IF LEFT UNATTENDED, CAN ALLOW SERIOUS SOIL LOSS FROM AN OTHERWISE STABLE SURFACE. A SINGLE HEAVY RAIN IS OFTEN SUFFICIENT TO GREATLY ENLARGE BARE SPOTS, AND THE LONGER REPAIRS ARE DELAYED, THE MORE COSTLY THEY BECOME. PROMPT ACTION WILL KEEP SEDIMENT LOSS AND REPAIR COST DOWN. NEW SEEDINGS SHOULD BE INSPECTED FREQUENTLY AND MAINTENANCE PERFORMED AS NEEDED. IF RILLS AND GULLIES DEVELOP, THEY MUST BE FILLED IN, RE-SEED, AND MULCHED AS SOON AS POSSIBLE. DIVERSIONS MAY BE NEEDED UNTIL NEW PLANTS TAKE HOLD.

**MAINTENANCE REQUIREMENTS EXTEND BEYOND THE SEEDING PHASE.** (COMPLETE VEGETATIVE COVER IS REQUIRED REGARDLESS OF COUNTY ISSUANCE OF A CERTIFICATE OF OCCUPANCY AND FINAL PAYMENT WILL NOT BE AWARDED UNTIL COMPLETE ESTABLISHMENT OF VEGETATIVE COVER.) WEAK OR DAMAGED SPOTS MUST BE RELIEM, FERTILIZED, MULCHED, AND RESEED AS PROMPTLY AS POSSIBLE. REFERTILIZATION MAY BE NEEDED TO MAINTAIN PRODUCTIVE STANDS.

**TEMPORARY VEGETATION**

SEEDING DATES: AUG. 16 - APRIL 15:

SEED MIXTURE	APPLICATION RATES/ACRE
RYE GRAIN	120 LBS.

SEEDING DATES: APRIL 16 - AUG. 15:

SEED MIXTURE	APPLICATION RATES/ACRE
GERMAN MILLET	40 LBS.

**LEGEND**

- EXISTING ASPHALT PAVEMENT
- EXISTING GRAVEL
- EXISTING WATER
- CALC. POINT/SET IRON ROD
- EX. IRON ROD
- EX. MAG NAIL
- EX. CONCRETE MONUMENT
- EX. UTILITY POLE
- EX. FIRE HYDRANT
- EX. TELEPHONE PEDESTAL
- EX. CONTOUR
- EX. WATER LINE
- EX. OVERHEAD UTILITIES
- PROPOSED ASPHALT PAVEMENT
- PROPOSED CONCRETE PAVEMENT
- PROPOSED GRAVEL
- PROPOSED OPEN SLOTTED WOOD DECKING
- PROPOSED PERMEABLE PAVEMENT
- PROPOSED STORM SEWER MANHOLE
- PROPOSED DROP INLET
- PROPOSED FIRE HYDRANT
- PROPOSED BENDS & TEES
- PROPOSED GATE VALVE
- PROPOSED FIRE DEPARTMENT CONNECTION
- PROPOSED WATERLINE
- PROPOSED FIRE LINE
- PROPOSED SANITARY SEWER
- PROPOSED CLEAN OUT
- PROPOSED SANITARY SEWER MANHOLE
- PROPOSED DRAINAGE FLOW
- PROPOSED CONTOUR
- PROPOSED SPOT GRADE (TOP OF ASPHALT/EOP) (UNLESS OTHERWISE NOTED)
- PROPOSED DITCH

**SEEDING SPECIFICATIONS**

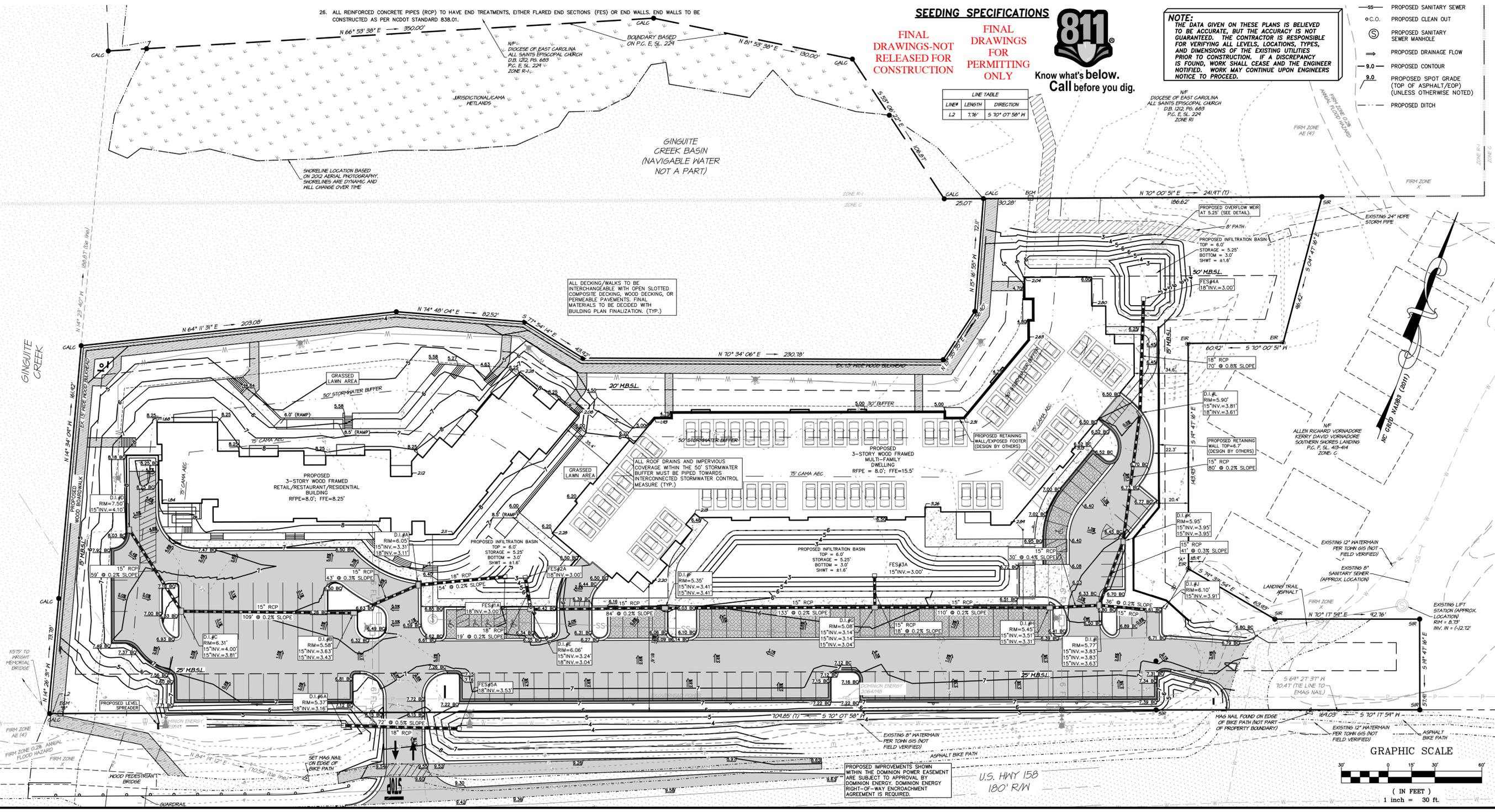
**FINAL DRAWINGS NOT RELEASED FOR CONSTRUCTION**

**FINAL DRAWINGS FOR PERMITTING ONLY**

**811**  
Know what's below.  
Call before you dig.

LINE#	LENGTH	DIRECTION
L2	7.76'	S 70° 07' 58" W

**NOTE:**  
THE DATA GIVEN ON THESE PLANS IS BELIEVED TO BE ACCURATE, BUT THE ACCURACY IS NOT GUARANTEED. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL LEVELS, LOCATIONS, TYPES, AND DIMENSIONS OF THE EXISTING UTILITIES PRIOR TO CONSTRUCTION. IF A DISCREPANCY IS FOUND, WORK SHALL CEASE AND THE ENGINEER NOTICED. WORK MAY CONTINUE UPON ENGINEERS NOTICE TO PROCEED.



**QUILBE & ASSOCIATES, P.C.**  
REGISTERED PROFESSIONAL ENGINEER  
SPECIALIZING IN CIVIL, SURVEYING, ENVIRONMENTAL SCIENCES, AND PLANNING  
4846 CAROLINA DRIVE, SUITE 200  
BLACK MOUNTAIN, NC 28711  
PHONE: (828) 659-9149  
FAX: (828) 659-9148  
WWW.QUILBE.COM

**REVISIONS**

NO.	DATE	PER TOWN COMMENTS	PER TOWN COMMENTS
1	06/05/23		
2	07/28/23		
3	11/10/23		

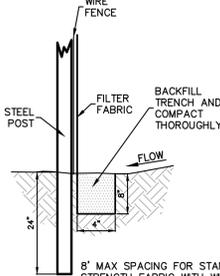
**PROJECT NO. P14064**  
**DESIGNED BY CMS**  
**DRAWN BY JJC**  
**CHECKED BY CMS**  
**ISSUE DATE 6/1/23**

**SHEET NO. 5 OF 11 SHEETS**

**GRADING & DRAINAGE PLAN**  
**GINGUITE CREEK**  
**6195 N. CROATAN HIGHWAY**  
NORTH CAROLINA  
DARE COUNTY  
ATLANTIC TOWNSHIP

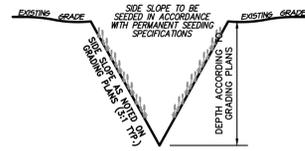


**MAINTENANCE:**  
INSPECT SEDIMENT FENCES AT LEAST ONCE A WEEK AND AFTER EACH RAINFALL. MAKE ANY REQUIRED REPAIRS IMMEDIATELY.  
SHOULD THE FABRIC OF A SEDIMENT FENCE COLLAPSE, TEAR, DECOMPOSE OR BECOME INEFFECTIVE, REPLACE IT PROMPTLY.  
REMOVE SEDIMENT DEPOSITS AS NECESSARY TO PROVIDE ADEQUATE STORAGE VOLUME FOR THE NEXT RAIN AND TO REDUCE PRESSURE ON THE FENCE. TAKE CARE TO AVOID UNDERMINING THE FENCE DURING CLEANOUT.  
REMOVE ALL FENCING MATERIALS AND UNSTABLE SEDIMENT DEPOSITS AND BRING THE AREA TO GRADE AND STABILIZE IT AFTER THE CONTRIBUTING DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.

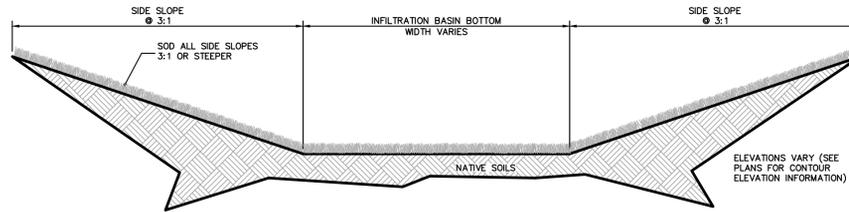


**SILT FENCE DETAIL**  
N.T.S.

- CONSTRUCTION & MAINTENANCE NOTES:**
- CONSTRUCT THE SEDIMENT BARRIER OF STANDARD STRENGTH OR EXTRA STRENGTH SYNTHETIC FILTER FABRICS.
  - ENSURE THAT THE HEIGHT OF THE SEDIMENT FENCE DOES NOT EXCEED 24 INCHES ABOVE THE GROUND SURFACE. (HIGHER FENCES MAY IMPOUND VOLUMES OF WATER SUFFICIENT TO CAUSE FAILURE OF THE STRUCTURE).
  - CONSTRUCT THE FILTER FABRIC FROM A CONTINUOUS ROLL CUT TO THE LENGTH OF THE BARRIER TO AVOID JOINTS. WHEN JOINTS ARE NECESSARY, SECURELY FASTEN THE FILTER CLOTH ONLY AT A SUPPORT POST WITH 4 FEET MINIMUM OVERLAP TO THE NEXT POST.
  - SUPPORT STANDARD STRENGTH FILTER FABRIC BY WIRE MESH FASTENED SECURELY TO THE UPSLOPE SIDE OF THE POSTS. EXTEND THE WIRE MESH SUPPORT TO THE BOTTOM OF THE TRENCH. FASTEN THE WIRE REINFORCEMENT, THEN FABRIC ON THE UPSLOPE SIDE OF THE FENCE POST. WIRE OR PLASTIC ZIP TIES SHOULD HAVE MINIMUM 50 POUND TENSILE STRENGTH.
  - WHEN A WIRE MESH SUPPORT FENCE IS USED, SPACE POSTS A MAXIMUM OF 8 FEET APART. SUPPORT POSTS SHOULD BE DRIVEN SECURELY INTO THE GROUND A MINIMUM OF 24 INCHES.
  - EXTRA STRENGTH FILTER FABRIC WITH 6 FEET POST SPACING DOES NOT REQUIRE WIRE MESH SUPPORT FENCE. SECURELY FASTEN THE FILTER FABRIC DIRECTLY TO POSTS. WIRE OR PLASTIC ZIP TIES SHOULD HAVE MINIMUM 50 POUND TENSILE STRENGTH.
  - EXCAVATE A TRENCH APPROXIMATELY 4 INCHES WIDE AND 8 INCHES DEEP ALONG THE PROPOSED LINE OF POSTS AND UPSLOPE FROM THE BARRIER (FIGURE 6.52A).
  - PLACE 12 INCHES OF THE FABRIC ALONG THE BOTTOM AND SIDE OF THE TRENCH.
  - BACKFILL THE TRENCH WITH SOIL PLACED OVER THE FILTER FABRIC AND COMPACT. THOROUGH COMPACTION OF THE BACKFILL IS CRITICAL TO SILT FENCE PERFORMANCE.
  - DO NOT ATTACH FILTER FABRIC TO EXISTING TREES.



**TYPICAL V-SWALE DETAIL**  
N.T.S.



**TYPICAL INFILTRATION BASIN CROSS-SECTION DETAIL**  
N.T.S.

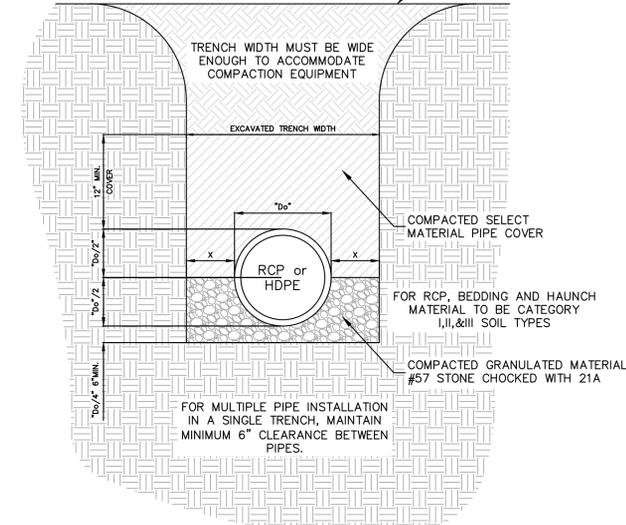
**HDPE NOTES:**

- ALL PIPE SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH THESE SPECIFICATIONS OR AS MODIFIED BY THE OWNER.
- TRENCH BOX OR OTHER SHORING METHODS SHALL NOT DISTURB THE PIPE BEDDING AND BACKFILL MATERIAL AFTER THEIR COMPACTION.
- WHERE THE TRENCH BOTTOM IS UNSTABLE, THE CONTRACTOR SHALL EXCAVATE TO A DEPTH INDICATED ON THE DRAWING OR AS DIRECTED BY THE OWNER AND REPLACE WITH BEDDING MATERIAL.
- BEDDING MATERIAL SHALL BE CRUSHED STONE OR WASHED #57 STONE, UNLESS OTHERWISE NOTE ON THE DRAWINGS OR REQUIRED BY THE OWNER. MINIMUM BEDDING THICKNESS SHALL BE 6-INCHES.
- BACKFILL MATERIAL SHALL CONFORM TO THE FOLLOWING:
  - INITIAL BACKFILL:
    - AGGREGATE NO. 25, 26, 21A, OR 21 B; AS INDICATED ON THE DRAWINGS OR AS DIRECTED BY THE OWNER, SHALL BE INSTALLED AS INITIAL BACKFILL IN THE PIPE ZONE EXTENDING NOT LESS THAN 12-INCHES ABOVE THE CROWN OF PIPE. MATERIAL SHALL BE INSTALLED AS REQUIRED IN ASTM 02321, LATEST EDITION.
  - FINAL BACKFILL:
    - FINAL BACKFILL MATERIALS SHALL BE THE SAME AS THE INITIAL BACKFILL UNLESS OTHERWISE INDICATED ON THE DRAWINGS OR DIRECTED BY THE OWNER.
- MINIMUM COVER:
  - TRAFFIC APPLICATIONS - MINIMUM COVER SHALL BE 24", MEASURED FROM THE TOP OF THE PIPE TO THE BOTTOM OF FLEXIBLE PAVEMENT OR TO THE TOP OF RIGID PAVEMENT.
  - NON-TRAFFIC APPLICATIONS - MINIMUM COVER IN GRASS OR LANDSCAPE AREA IS 12-INCHES FROM THE TOP OF THE PIPE TO GROUND SURFACE.

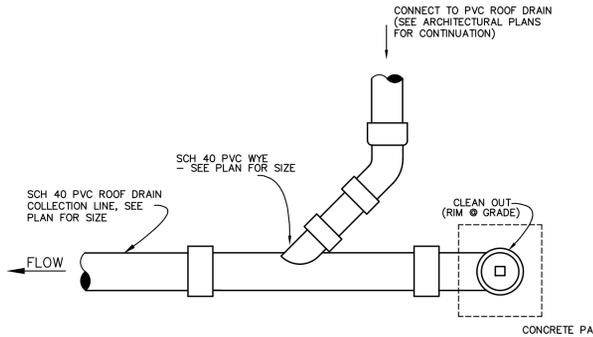
**NOTES:**

- SELECT MATERIAL PIPE COVER SHALL BE 12" (MINIMUM) DEEP OVER TOP OF PIPE.
- SELECT MATERIAL BACKFILL SHALL BE CBR 20 COMPACTED TO 95% DENSITY. BACKFILL COMPACTED IN 12" LIFTS.

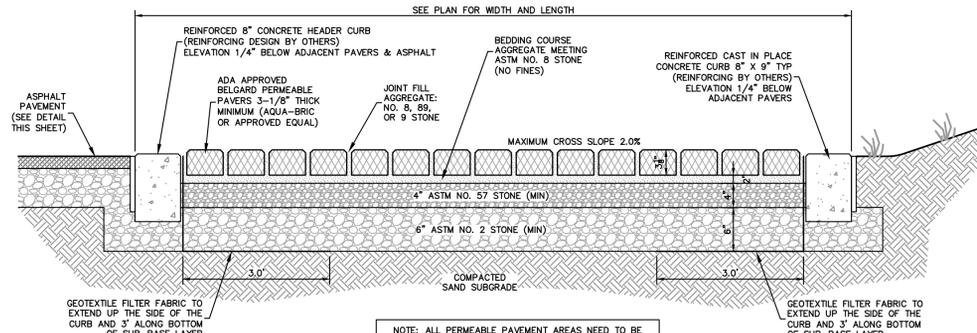
TRENCH SHALL BE BACKFILLED WITH CLEAN SAND AND TOPPED WITH TOP SOIL. IF LOCATED IN PAVEMENT, PAVE PER PAVEMENT SPECIFICATIONS.



**STORM PIPE TRENCH SECTION**  
N.T.S.

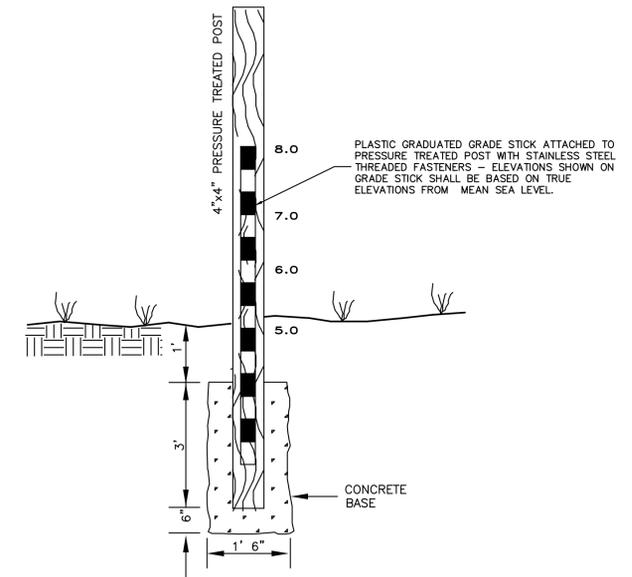


**ROOF DRAIN COLLECTION LATERAL**  
N.T.S.



**TYPICAL BELGARD® PERMEABLE PAVER INSTALLATION DETAIL**  
N.T.S.

NOTE: ALL PERMEABLE PAVEMENT AREAS NEED TO BE UNDERCUT TO REMOVE PEAT DEPOSITS PRIOR TO INSTALLATION. SEE GEOTECHNICAL REPORT FOR DEPTHS.



**DEPTH BENCHMARK**  
N.T.S.

FINAL DRAWINGS-NOT RELEASED FOR CONSTRUCTION

FINAL DRAWINGS FOR PERMITTING ONLY

NC License # C-0208  
SMICE #59  
**Quible & Associates, P.C.**  
ENGINEERING & SURVEYING  
ENVIRONMENTAL SCIENCE & SURVEYING  
ENGINEERING/SURVEYING NOT OFFERED IN BLACK W/IN OFFICE\*\*  
8486 GARATON HWY  
BLACK MOUNTAIN, NC 28711  
PHONE: (828) 689-8427  
FAX: (828) 689-8428

PROFESSIONAL SEAL  
043652  
1/10/2023  
**TILEN M. SAUNDERS**  
CERTIFICATION

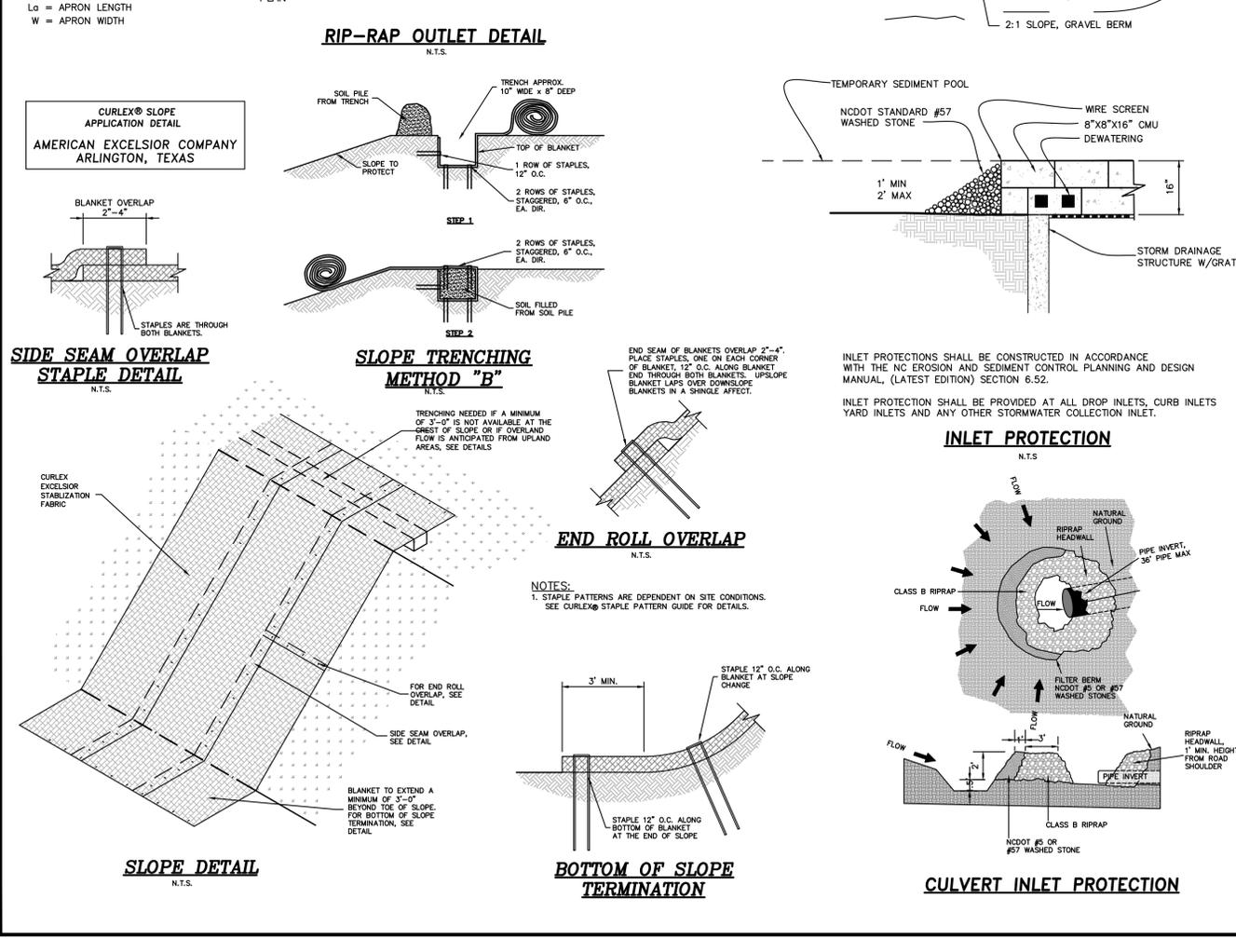
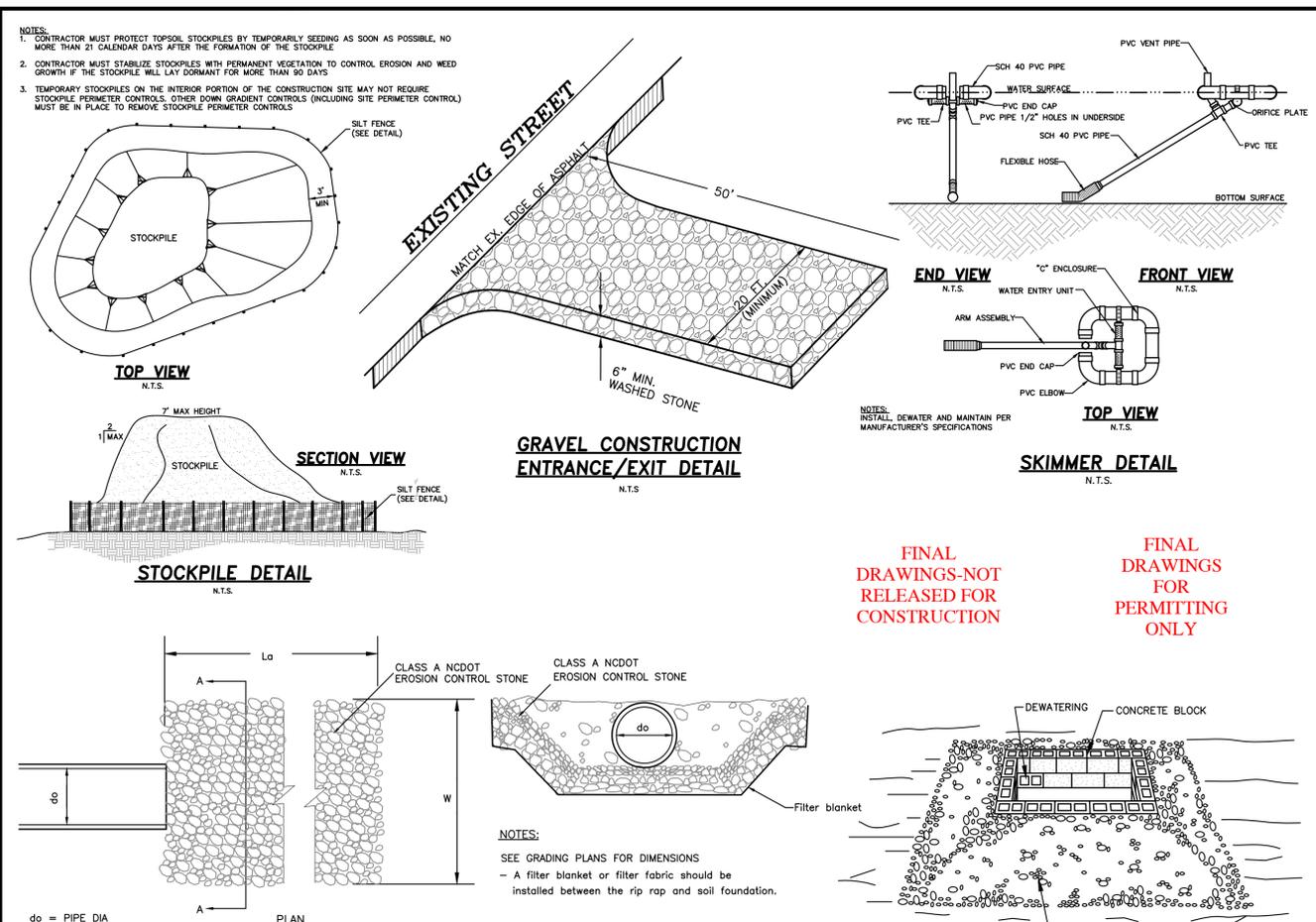
COPYRIGHT © 2023, P.C.  
THIS DOCUMENT IS THE PROPERTY OF QUILBE & ASSOCIATES, P.C. ANY REPRODUCTION OR DISTRIBUTION OF THIS DOCUMENT IS PROHIBITED.  
IF THIS DOCUMENT IS NOT SIGNED PROFESSIONALLY BY AN ENGINEER, IT SHALL BE CONSIDERED PRELIMINARY AND SHALL NOT BE USED FOR ANY COURSE OF ACTION UNLESS OTHERWISE NOTED.

NO.	DATE	REVISIONS
1	06/05/23	PER TOWN COMMENTS
2	07/28/23	PER TOWN COMMENTS
3	11/10/23	PER TOWN COMMENTS

**DRAINAGE DETAILS**  
**GINGUITE CREEK**  
**6195 N. CROATAN HIGHWAY**  
NORTH CAROLINA  
DARE COUNTY  
ATLANTIC TOWNSHIP

PROJECT NO.	P14064
DESIGNED BY	CMS
DRAWN BY	JJC
CHECKED BY	CMS
ISSUE DATE	6/1/23

SHEET NO.  
**7**  
OF 11 SHEETS



**GROUND STABILIZATION AND MATERIALS HANDLING PRACTICES FOR COMPLIANCE WITH THE NCG01 CONSTRUCTION GENERAL PERMIT**

Implementing the details and specifications on this plan sheet will result in the construction activity being considered compliant with the Ground Stabilization and Materials Handling sections of the NCG01 Construction General Permit (Sections E and F, respectively). The permittee shall comply with the Erosion and Sediment Control plan approved by the delegated authority having jurisdiction. All details and specifications shown on this sheet may not apply depending on site conditions and the delegated authority having jurisdiction.

**SECTION E: GROUND STABILIZATION**

Site Area Description	Stabilize within this many calendar days after ceasing land disturbance	Timeframe variations
(a) Perimeter dikes, swales, ditches, and perimeter slopes	7	None
(b) High Quality Water (HQW) Zones	7	None
(c) Slopes steeper than 3:1	7	If slopes are 10' or less in length and are not steeper than 2:1, 14 days are allowed -7 days for slopes greater than 50' in length and with slopes steeper than 4:1 -7 days for perimeter dikes, swales, ditches, perimeter slopes and HQW Zones -10 days for Falls Lake Watershed
(d) Slopes 3:1 to 4:1	14	-7 days for perimeter dikes, swales, ditches, perimeter slopes and HQW Zones -10 days for Falls Lake Watershed unless there is zero slope
(e) Areas with slopes flatter than 4:1	14	-7 days for perimeter dikes, swales, ditches, perimeter slopes and HQW Zones -10 days for Falls Lake Watershed unless there is zero slope

**NOTE:** After the permanent cessation of construction activities, any areas with temporary ground stabilization shall be converted to permanent ground stabilization as soon as practicable but in no case longer than 90 calendar days after the last land disturbing activity. Temporary ground stabilization shall be maintained in a manner to render the surface stable against accelerated erosion until permanent ground stabilization is achieved.

**GROUND STABILIZATION SPECIFICATION**  
 Stabilize the ground sufficiently so that rain will not dislodge the soil. Use one of the techniques in the table below:

Temporary Stabilization	Permanent Stabilization
<ul style="list-style-type: none"> <li>Temporary grass seed covered with straw or other mulches and tackifiers</li> <li>Hydroseeding</li> <li>Roller erosion control products with or without temporary grass seed</li> <li>Appropriately applied straw or other mulch</li> <li>Plastic sheeting</li> </ul>	<ul style="list-style-type: none"> <li>Permanent grass seed covered with straw or other mulches and tackifiers</li> <li>Geotextile fabrics such as permanent soil reinforcement matting</li> <li>Hydroseeding</li> <li>Shrubs or other permanent plantings covered with mulch</li> <li>Uniform and evenly distributed ground cover sufficient to restrain erosion</li> <li>Structural methods such as concrete, asphalt or retaining walls</li> <li>Roller erosion control products with grass seed</li> </ul>

**POLYACRYLAMIDES (PAMS) AND FLOCCULANTS**

- Select flocculants that are appropriate for the soils being exposed during construction, selecting from the NC DWR List of Approved PAMS/Flocculants.
- Apply flocculants at or before the inlets to Erosion and Sediment Control Measures.
- Apply flocculants at the concentrations specified in the NC DWR List of Approved PAMS/Flocculants and in accordance with the manufacturer's instructions.
- Provide ponding area for containment of treated stormwater before discharging offsite.
- Store flocculants in leak-proof containers that are kept under storm-resistant cover or surrounded by secondary containment structures.

**EQUIPMENT AND VEHICLE MAINTENANCE**

- Maintain vehicles and equipment to prevent discharge of fluids.
- Provide drip pans under any stored equipment.
- Identify leaks and repair as soon as feasible, or remove leaking equipment from the project.
- Collect all spent fluids, store in separate containers and properly dispose as hazardous waste (recycle when possible).
- Remove leaking vehicles and construction equipment from service until the problem has been corrected.
- Bring used fuels, lubricants, coolants, hydraulic fluids and other petroleum products to a recycling or disposal center that handles these materials.

**LITTER, BUILDING MATERIAL AND LAND CLEARING WASTE**

- Never bury or burn waste. Place litter and debris in approved waste containers.
- Provide a sufficient number and size of waste containers (e.g. dumpster, trash receptacle) on site to contain construction and domestic wastes.
- Locate waste containers at least 50 feet away from storm drain inlets and surface waters unless no other alternatives are reasonably available.
- Locate waste containers on areas that do not receive substantial amounts of runoff from upland areas and does not drain directly to a storm drain, stream or wetland.
- Cover waste containers at the end of each workday and before storm events or provide secondary containment. Repair or replace damaged waste containers.
- Anchor all lightweight items in waste containers during times of high winds.
- Empty waste containers as needed to prevent overflow. Clean up immediately if containers overflow.
- Dispose waste off-site at an approved disposal facility.
- On business days, clean up and dispose of waste in designated waste containers.

**PAINT AND OTHER LIQUID WASTE**

- Do not dump paint and other liquid waste into storm drains, streams or wetlands.
- Locate paint washouts at least 50 feet away from storm drain inlets and surface waters unless no other alternatives are reasonably available.
- Contain liquid wastes in a controlled area.
- Containment must be labeled, sized and placed appropriately for the needs of site.
- Prevent the discharge of soaps, solvents, detergents and other liquid wastes from construction sites.

**PORTABLE TOILETS**

- Install portable toilets on level ground, at least 50 feet away from storm drains, streams or wetlands unless there is no alternative reasonably available. If 50 foot offset is not attainable, provide relocation of portable toilet behind silt fence or place on a gravel pad and surround with sand bags.
- Provide staking or anchoring of portable toilets during periods of high winds or high foot traffic areas.
- Monitor portable toilets for leaking and properly dispose of any leaked material. Utilize a licensed sanitary waste hauler to remove leaking portable toilets and replace with properly operating unit.

**EARTHEN STOCKPILE MANAGEMENT**

- Show stockpile locations on plans. Locate earthen-material stockpile areas at least 50 feet away from storm drain inlets, sediment basins, perimeter sediment controls and surface waters unless it can be shown no other alternatives are reasonably available.
- Protect stockpile with silt fence installed along toe of slope with a minimum offset of five feet from the toe of stockpile.
- Provide stable stone access point when feasible.
- Stabilize stockpile within the timeframes provided on this sheet and in accordance with the approved plan and any additional requirements. Soil stabilization is defined as vegetative, physical or chemical coverage techniques that will restrain accelerated erosion on disturbed soils for temporary or permanent control needs.

**NCG01 GROUND STABILIZATION AND MATERIALS HANDLING EFFECTIVE: 04/01/19**

**PART III SELF-INSPECTION, RECORDKEEPING AND REPORTING**

**SECTION A: SELF-INSPECTION**

Self-inspections are required during normal business hours in accordance with the table below. When adverse weather or site conditions would cause the safety of the inspection personnel to be in jeopardy, the inspection may be delayed until the next business day on which it is safe to perform the inspection. In addition, when a storm event of equal to or greater than 1.0 inch occurs outside of normal business hours, the self-inspection shall be performed upon the commencement of the next business day. Any time when inspections were delayed shall be noted in the inspection Record.

Inspect	Frequency (during normal business hours)	Inspection records must include:
(1) Rain gauge maintained in good working order	Daily	Daily rainfall amounts. If no daily rain gauge observations are made during weekend or holiday periods, and no individual-day rainfall information is available, record the cumulative rain measurement for those unattended days (and this will determine if a site inspection is needed). Days on which no rainfall occurred shall be recorded as "zero." The permittee may use another rain-monitoring device approved by the Division.
(2) E&SC Measures	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours	1. Identification of the measures inspected, 2. Date and time of the inspection, 3. Name of the person performing the inspection, 4. Indication of whether the measures were operating properly, 5. Description of maintenance needs for the measure, 6. Description, evidence, and date of corrective actions taken.
(3) Stormwater discharge outfalls (SDOs)	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours	1. Identification of the discharge outfalls inspected, 2. Date and time of the inspection, 3. Name of the person performing the inspection, 4. Evidence of indicators of stormwater pollution such as oil sheen, floating or suspended solids or discoloration, 5. Indication of visible sediment leaving the site, 6. Description, evidence, and date of corrective actions taken.
(4) Perimeter of site	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours	If visible sedimentation is found outside site limits, then a record of the following shall be made: 1. Actions taken to clean up or stabilize the sediment that has left the site limits, 2. Description, evidence, and date of corrective actions taken, and 3. An explanation as to the actions taken to control future releases.
(5) Streams or wetlands onsite or off-site (where accessible)	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours	If the stream or wetland has increased visible sedimentation or a stream has visible increased turbidity from the construction activity, then a record of the following shall be made: 1. Description, evidence and date of corrective actions taken, and 2. Records of the required reports to the appropriate Division Regional Office per Part III, Section C, Item (2)(a) of this permit.
(6) Ground stabilization measures	After each phase of grading	1. The phase of grading (installation of perimeter E&SC measures, clearing and grubbing, installation of storm drainage facilities, completion of all land-disturbing activity, construction or redevelopment, permanent ground cover). 2. Documentation that the required ground stabilization measures have been provided within the required timeframe or an assurance that they will be provided as soon as possible.

**NOTE:** The rain inspection resets the required 7 calendar day inspection requirement.

**PART III SELF-INSPECTION, RECORDKEEPING AND REPORTING**

**SECTION B: RECORDKEEPING**

**1. E&SC Plan Documentation**

The approved E&SC plan as well as any approved deviation shall be kept on the site. The approved E&SC plan must be kept up-to-date throughout the coverage under this permit. The following items pertaining to the E&SC plan shall be documented in the manner described:

Item to Document	Documentation Requirements
(a) Each E&SC Measure has been installed and does not significantly deviate from the locations, dimensions and relative elevations shown on the approved E&SC Plan.	Initial and date each E&SC Measure on a copy of the approved E&SC Plan or complete, date and sign an inspection report that lists each E&SC Measure shown on the approved E&SC Plan. This documentation is required upon the initial installation of the E&SC Measures or if the E&SC Measures are modified after initial installation.
(b) A phase of grading has been completed.	Initial and date a copy of the approved E&SC Plan or complete, date and sign an inspection report to indicate completion of the construction phase.
(c) Ground cover is located and installed in accordance with the approved E&SC Plan.	Initial and date a copy of the approved E&SC Plan or complete, date and sign an inspection report to indicate compliance with approved ground cover specifications.
(d) The maintenance and repair requirements for all E&SC Measures have been performed.	Complete, date and sign an inspection report.
(e) Corrective actions have been taken to E&SC Measures.	Initial and date a copy of the approved E&SC Plan or complete, date and sign an inspection report to indicate the completion of the corrective action.

**2. Additional Documentation**

In addition to the E&SC Plan documents above, the following items shall be kept on the site and available for agency inspectors at all times during normal business hours, unless the Division provides a site-specific exemption based on unique site conditions that make this requirement not practical:

- This general permit as well as the certificate of coverage, after it is received.
- Records of inspections made during the previous 30 days. The permittee shall record the required observations on the Inspection Record Form provided by the Division or a similar inspection form that includes all the required elements. Use of electronically available records in lieu of the required paper copies will be allowed if shown to provide equal access and utility as the hard-copy records.
- All data used to complete the Notice of Intent and older inspection records shall be maintained for a period of three years after project completion and made available upon request. [40 CFR 122.41]

**PART III SELF-INSPECTION, RECORDKEEPING AND REPORTING**

**SECTION C: REPORTING**

**1. Occurrences that must be reported**

Permittees shall report the following occurrences:

- Visible sediment deposition in a stream or wetland.
- Oil spills if:
  - They are 25 gallons or more,
  - They are less than 25 gallons but cannot be cleaned up within 24 hours,
  - They cause sheen on surface waters (regardless of volume), or
  - They are within 100 feet of surface waters (regardless of volume).
- Releases of hazardous substances in excess of reportable quantities under Section 311 of the Clean Water Act (Ref: 40 CFR 110.3 and 40 CFR 117.3) or Section 102 of CERCLA (Ref: 40 CFR 302.4) or G.S. 143-215.85.
- Anticipated bypasses and unanticipated bypasses.
- Noncompliance with the conditions of this permit that may endanger health or the environment.

**2. Reporting Timeframes and Other Requirements**

After a permittee becomes aware of an occurrence that must be reported, he shall contact the appropriate Division regional office within the timeframes and in accordance with the other requirements listed below. Occurrences outside normal business hours may also be reported to the Division's Emergency Response personnel at (800) 662-7956, (800) 858-0368 or (919) 733-3300.

Occurrence	Reporting Timeframes (After Discovery) and Other Requirements
(a) Visible sediment deposition in a stream or wetland	<ul style="list-style-type: none"> <li><b>Within 24 hours</b>, an oral or electronic notification.</li> <li><b>Within 7 calendar days</b>, a report that contains a description of the sediment and actions taken to address the cause of the deposition. Division staff may waive the requirement for a written report on a case-by-case basis.</li> <li>If the stream is named on the NC 303(a) list as impaired for sediment-related causes, the permittee may be required to perform additional monitoring, inspections or apply more stringent practices if staff determine that additional requirements are needed to assure compliance with the federal or state impaired-waters conditions.</li> </ul>
(b) Oil spills and release of hazardous substances per Item 1(b)-(c) above	<ul style="list-style-type: none"> <li><b>Within 24 hours</b>, an oral or electronic notification. The notification shall include information about the date, time, nature, volume and location of the spill or release.</li> </ul>
(c) Anticipated bypasses [40 CFR 122.41(m)(3)]	<ul style="list-style-type: none"> <li><b>A report at least ten days before the date of the bypass, if possible.</b> The report shall include an evaluation of the anticipated quality and effect of the bypass.</li> </ul>
(d) Unanticipated bypasses [40 CFR 122.41(m)(3)]	<ul style="list-style-type: none"> <li><b>Within 24 hours</b>, an oral or electronic notification.</li> <li><b>Within 7 calendar days</b>, a report that includes an evaluation of the quality and effect of the bypass.</li> </ul>
(e) Noncompliance with the conditions of this permit that may endanger health or the environment [40 CFR 122.41(j)(7)]	<ul style="list-style-type: none"> <li><b>Within 24 hours</b>, an oral or electronic notification.</li> <li><b>Within 7 calendar days</b>, a report that contains a description of the noncompliance, and its causes; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time noncompliance is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance. [40 CFR 122.41(j)(6)].</li> <li>Division staff may waive the requirement for a written report on a case-by-case basis.</li> </ul>

**SESC DETAILS**

**GINGUITE CREEK**

**6195 N. CROATAN HIGHWAY**

NORTH CAROLINA  
DARE COUNTY  
ATLANTIC TOWNSHIP

PROJECT NO. **P14064**

DESIGNED BY **CMS**

DRAWN BY **JJC**

CHECKED BY **CMS**

ISSUE DATE **6/1/23**

SHEET NO. **8**

OF 11 SHEETS

REVISIONS:

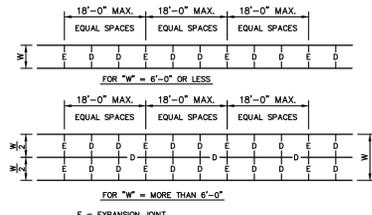
NO.	DATE	FEET TOWN COMMENTS	FEET TOWN COMMENTS	FEET TOWN COMMENTS
1	06/05/23			
2	07/28/23			
3	11/10/23			

NC License # C-0208  
 QUILBE & ASSOCIATES, P.C.  
 SW/C 959  
 90 CHURCH STREET  
 BLACK MOUNTAIN, NC 28711  
 Phone: (828) 689-6247  
 Fax: (828) 689-6248

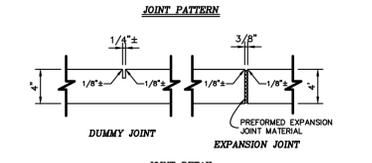
Quilbe & Associates, P.C.  
 PROFESSIONAL ENGINEERS  
 ENVIRONMENTAL SCIENCES SURVEYING  
 ENGINEERING/SURVEYING NOT OFFERED AT BLACK MOUNTAIN OFFICE  
 8486 GARATON HWY  
 BLACK MOUNTAIN, NC 28768  
 Phone: (828) 689-6247  
 Fax: (828) 689-6248

PROFESSIONAL SEAL  
 043652  
 1/10/2020  
 J. J. CROATAN  
 CIVIL ENGINEER

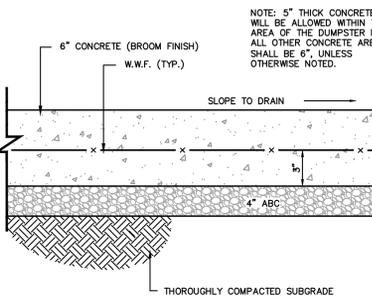
THIS DOCUMENT IS THE PROPERTY OF QUILBE & ASSOCIATES, P.C. ANY UNAUTHORIZED REPRODUCTION IS PROHIBITED.  
 IF THIS DOCUMENT IS NOT SIGNED AND SEALED BY A PROFESSIONAL ENGINEER, IT SHALL BE CONSIDERED PRELIMINARY AND SHALL NOT BE USED FOR ANY OFFICIAL OR LEGAL PURPOSES.  
 OUR LAND CONSTRUCTION UNLESS OTHERWISE NOTED.



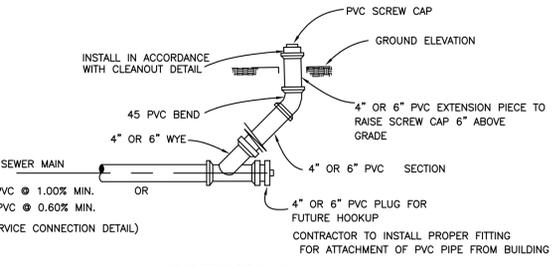
NOTES: EXCEPT WHERE SHOWN IN THE PLAN, ALL NEW CONC. WALKS HAVE JOINTS SPACED AS SHOWN IN THESE DETAILS. AN EXPANSION JOINT SHALL BE USED TO SEPARATE THE NEW CONC. WALK FROM OTHER NEW OR EXISTING CONCRETE CONSTRUCTION.



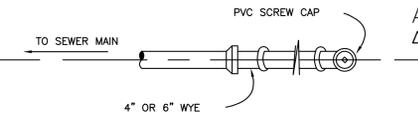
**SIDEWALK JOINTS**  
N.T.S.



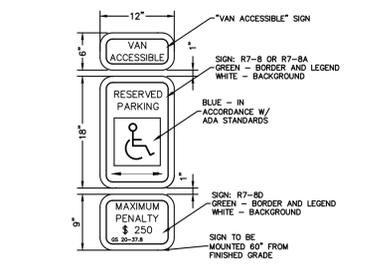
**CONCRETE PAVEMENT SECTION**  
N.T.S.



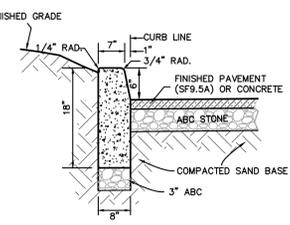
**SECTION A**



**SINGLE SERVICE LATERAL CONNECTION**

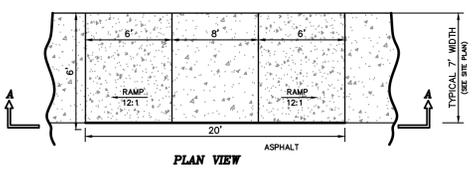


**ADA RESERVED PARKING SIGN DETAIL**  
N.T.S.



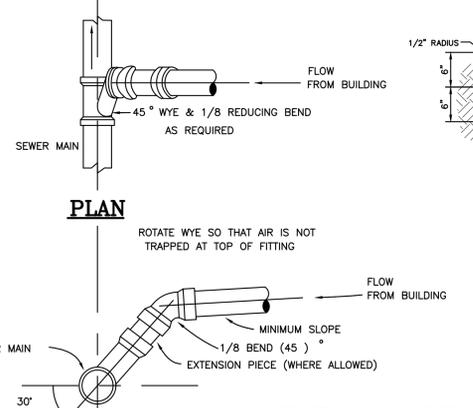
**PARKWAY CURB**  
N.T.S.

**TYPICAL SPECIFICATIONS**  
SPECIFICATIONS FOR SIDEWALKS, CURBS, ALLEYS, CONCRETE PAVEMENT  
ALL REINFORCING STEEL SHALL BE GRADE 60 (ASTM A615)  
ALL WELDED WIRE FABRIC SHALL BE 6 x 6, W1.4 x W1.4 (ASTM A185)  
A 1-1/2" CLEAR CONCRETE COVER SHALL BE MAINTAINED ON ALL REINFORCEMENT  
ALL CONCRETE SHALL BE 3000 PSI FIBER MESH UNLESS OTHERWISE NOTED. SPECIFICATIONS OF ASPHALT  
ALL ABC STONE SHALL BE COMPACTED TO 100% OF STANDARD PROCTOR (ASTM D698)  
ASPHALT SHALL BE 2" SF9.5B  
SPECIFICATIONS FOR SUBBASE  
ALL SUBBASE SHALL BE COMPACTED TO 95% OF STANDARD PROCTOR (ASTM D698)

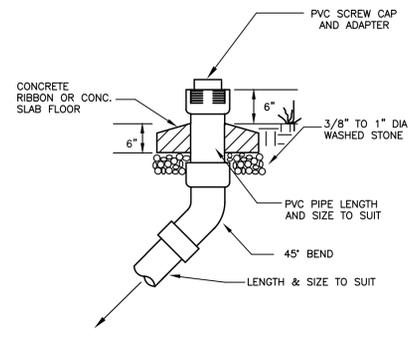


**WHEELCHAIR RAMP**  
N.T.S.

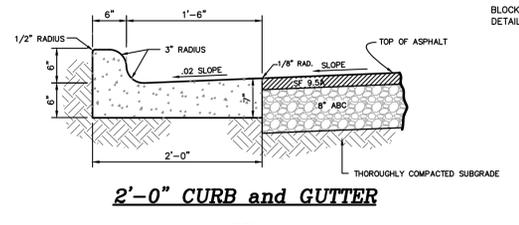
1. USE ADJACENT TO ALL HANDICAPPED SPACES.
2. DETECTABLE WARNING MUST BE INSTALLED AT ACCESS TO VEHICULAR TRAFFIC AREAS AND PEDESTRIAN CROSSINGS.



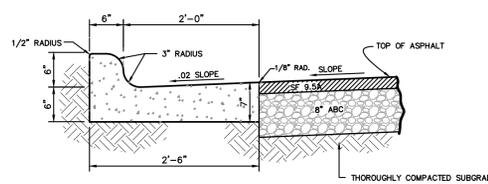
**SERVICE CONNECTION**  
N.T.S.



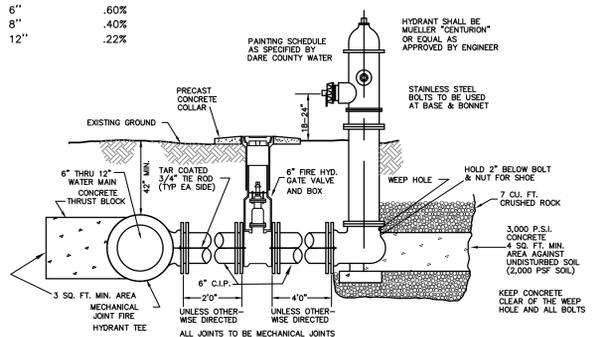
**TYPICAL SEWER CLEAN-OUT**  
N.T.S.



**2'-0" CURB and GUTTER**  
N.T.S.



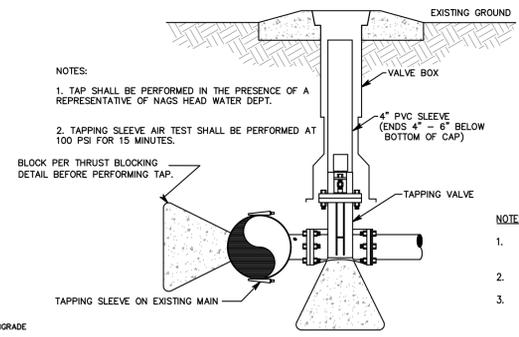
**2'-6" CURB and GUTTER**  
REF. NCDOT STD. 846.01  
N.T.S.



**TYPICAL FIRE HYDRANT ASSEMBLY**

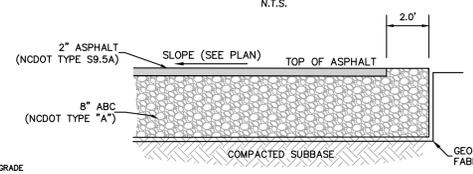
**IN FIELD PIPE OPENINGS**  
N.T.S.

- NOTES:  
1. THIS APPLIES TO ALL PIPES 6" DIAMETER OR LESS UNLESS OTHERWISE SPECIFIED.  
2. CLOSE WITH NON-SHRINK GROUT AFTER PIPE INSTALLATION.

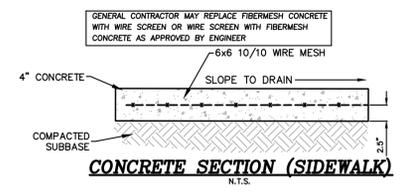


- NOTES:  
1. TAP SHALL BE PERFORMED IN THE PRESENCE OF A REPRESENTATIVE OF NAGS HEAD WATER DEPT.  
2. TAPPING SLEEVE AIR TEST SHALL BE PERFORMED AT 100 PSI FOR 15 MINUTES.  
BLOCK PER THRUST BLOCKING DETAIL BEFORE PERFORMING TAP.

**TAPPING SLEEVE DETAIL**  
N.T.S.

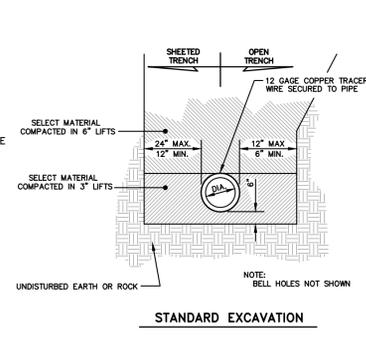


**ASPHALT SECTION**  
N.T.S.



**CONCRETE SECTION (SIDEWALK)**  
N.T.S.

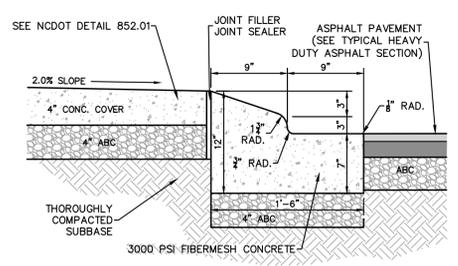
**TYPICAL WATERLINE BACKFILLING REQUIREMENTS AND TRENCH BOTTOM DIMENSIONS**  
N.T.S.



- NOTES:  
1. FOR TRENCHES REQUIRING SHORING AND BRACING, DIMENSIONS SHALL BE TAKEN FROM THE INSIDE FACE OF THE SHORING AND BRACING.  
2. NO ROCKS OR BOULDERS 4" AND LARGER SHALL BE USED IN INITIAL BACKFILL AREA.  
3. ALL BACKFILL MATERIAL SHALL BE SATISFACTORY SOIL MATERIALS UNLESS OTHERWISE SPECIFIED BY THE ENGINEER. (SATISFACTORY SOIL SHALL CONSIST OF SAND OR GRAVEL CONTAINING LESS THAN 20% BY WEIGHT OF FINES [SW, SP, SPM, SM] HAVING A LIQUID LIMIT LESS THAN 20 AND PLASTIC LIMIT LESS THAN 6, AND FREE OF RUBBLE, ORGANICS, CLAY, DEBRIS, AND OTHER UNSUITABLE MATERIAL.)

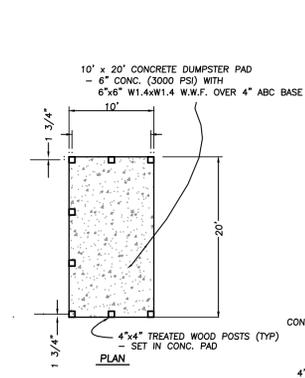
- COMPACTION NOTES:  
1. PROOF ROLL ALL NEW PAVED AREAS. NOTIFY OWNER AND ENGINEER OF ANY UNACCEPTABLE AREAS.  
2. COMPACT BACKFILL AND SUBGRADE TO 98% OF THE STANDARD PROCTOR MAXIMUM DRY DENSITY (ASTM D1557) ALL BACKFILL MATERIAL SHALL BE SELECT BACKFILL UNLESS OTHERWISE SPECIFIED BY THE ENGINEER.  
3. SELECT FILL SHALL CONSIST OF SAND OR GRAVEL CONTAINING LESS THAN 20% BY WEIGHT OF FINES [SP, SM, SW, GP, GW] HAVING A LIQUID LIMIT LESS THAN 20 AND PLASTIC LIMIT LESS THAN 6, AND FREE OF RUBBLE, ORGANICS, CLAY, DEBRIS, AND OTHER UNSUITABLE MATERIAL.

**COMPACTION NOTES**



**MOUNTABLE "ROLLED" CURB & CONCRETE ISLAND DETAIL**  
SEE NCDOT DIV. 8 DETAIL 846.01 AND DETAIL 852.01  
N.T.S.

**TYPICAL SANITARY SEWER TRENCHING**  
N.T.S.



**DUMPSTER PAD**

**ENCLOSURE**

**CONCRETE DUMPSTER PAD AND ENCLOSURE**  
N.T.S.  
(NOTE: DUMPSTER PAD DRAIN NOT SHOWN)

NC License # C-028  
SMCE 1959  
**Quible & Associates, P.C.**  
ENGINEERING & SURVEYING  
ENVIRONMENTAL SCIENCES & SURVEYING  
8446 GARLAND HWY.  
BLACK MOUNTAIN, NC 27686  
Phone: (828) 891-8147  
FAX: (828) 891-8148  
WWW.QUIBLEANDASSOCIATES.COM



COPYRIGHT © 2013, P.C.  
QUIBLE & ASSOCIATES, P.C.  
THIS DOCUMENT IS THE PROPERTY OF QUIBLE & ASSOCIATES, P.C. ANY REPRODUCTION OR TRANSMISSION OF THIS DOCUMENT IS PROHIBITED.  
IF THIS DOCUMENT IS NOT SIGNED AND DATED BY THE ENGINEER, IT SHALL BE CONSIDERED PRELIMINARY AND SHALL NOT BE USED FOR ANY CONSTRUCTION UNLESS OTHERWISE NOTED.

NO.	DATE	REVISIONS	PER TOWN COMMENTS
1	06/05/23		PER TOWN COMMENTS
2	07/28/23		PER TOWN COMMENTS
3	11/10/23		PER TOWN COMMENTS

**SITE & UTILITY DETAILS**  
**GINGUITE CREEK**  
**6195 N. CROATAN HIGHWAY**  
NORTH CAROLINA  
DARE COUNTY  
ATLANTIC TOWNSHIP

PROJECT NO. P14064  
DESIGNED BY CMS  
DRAWN BY JJC  
CHECKED BY CMS  
ISSUE DATE 6/1/23

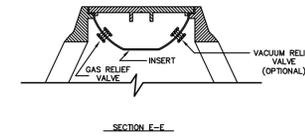
SHEET NO. 9 OF 11 SHEETS

FINAL DRAWINGS-NOT RELEASED FOR CONSTRUCTION

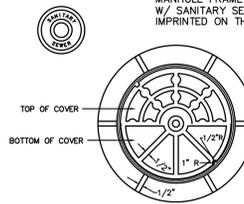
FINAL DRAWINGS FOR PERMITTING ONLY



MANHOLE INSERT ISOMETRIC  
INSERT TO BE BY PARSONS ENVIRONMENTAL PRODUCTS, INC. OR APPROVED EQUAL.



SECTION E-E



TOP OF COVER  
BOTTOM OF COVER

EAST JORDAN IRON WORKS, INC.  
MANHOLE FRAME AND COVER - V-1384  
W/ SANITARY SEWER  
IMPRINTED ON THE LID

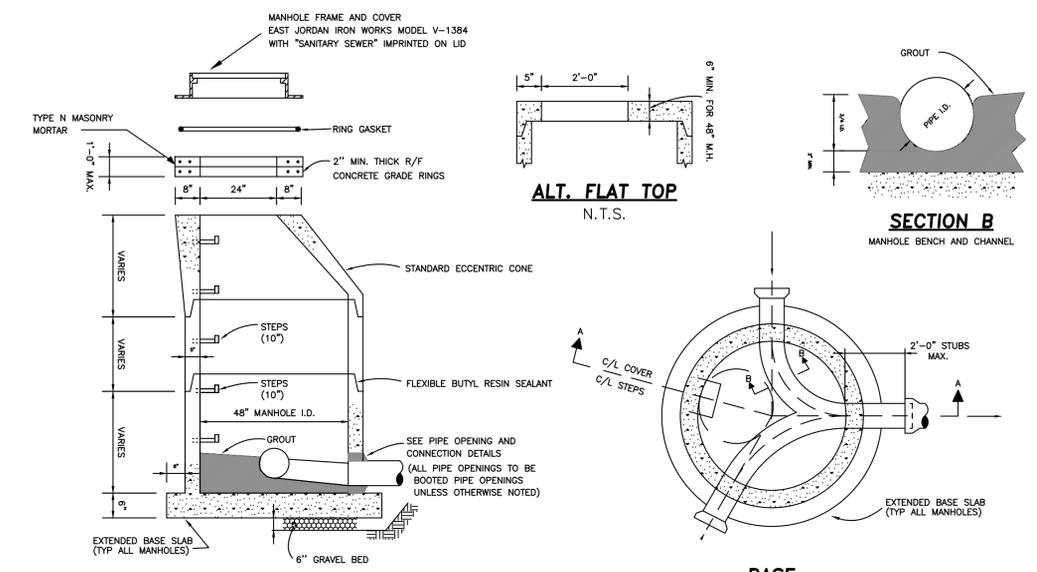
MINIMUM AVERAGE WEIGHTS	
RING	180 LBS
COVER	135 LBS
TOTAL	315 LBS

**WATERTIGHT MANHOLE INSERT**

N.T.S.

**TYPICAL MANHOLE RING & COVER DETAILS**

N.T.S.



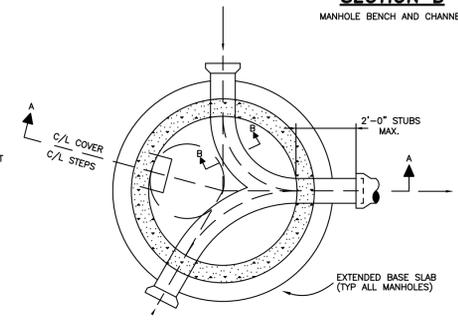
SECTION A

**STANDARD PRECAST CONCRETE MANHOLE**

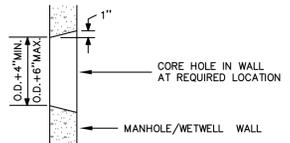
N.T.S.

ALT. FLAT TOP  
N.T.S.

SECTION B  
MANHOLE BENCH AND CHANNEL



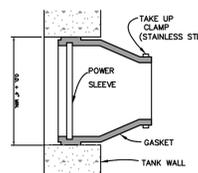
BASE



**IN FIELD PIPE OPENINGS**

N.T.S.

- NOTES:  
1. THIS APPLIES TO ALL PIPES 6" DIAMETER OR LESS UNLESS OTHERWISE SPECIFIED.  
2. CLOSE WITH NON-SHRINK GROUT AFTER PIPE INSTALLATION.



**BOOTED PIPE OPENINGS**

N.T.S.

- NOTES:  
1. PIPE TO MANHOLE CONNECTION TO CONFORM TO LATEST ASTM C-478 SPECIFICATION.  
2. FLEXIBLE BOOT CONNECTOR TO CONFORM TO LATEST ASTM C-923 SPECIFICATION.  
3. BOOT CONNECTOR IS MANUFACTURED BY THE PRESS SEAL GASKET CORP., FORT WAYNE, IN.  
4. SEE MANUFACTURER'S LITERATURE FOR FURTHER INFORMATION AND DETAIL.

NC License # C-0208  
SMICE 1959  
**Quible & Associates, P.C.**  
ENGINEERING & SURVEYING  
ENVIRONMENTAL SCIENCES & SURVEYING  
8446 GARATON HWY.  
POWELL POINT, NC 27868  
Phone: (607) 891-8127  
FAX: (607) 891-8128  
WWW.QUIBLEANDASSOCIATES.COM

NORTH CAROLINA  
PROFESSIONAL SEAL  
043652  
ALEX M. SAUNDERS  
CERTIFICATION

COPYRIGHT © 2023 P.C.  
QUIBLE & ASSOCIATES, P.C.  
THIS DOCUMENT IS THE PROPERTY OF QUIBLE & ASSOCIATES, P.C. ANY ALTERATION OR REPRODUCTION IS PROHIBITED.  
IF THIS DOCUMENT IS NOT SIGNED BY A PROFESSIONAL ENGINEER OR SURVEYOR, IT SHALL BE CONSIDERED PRELIMINARY AND SHALL NOT BE USED FOR ANY OFFICIAL OR LEGAL PURPOSES, UNLESS OTHERWISE NOTED.

NO.	DATE	PER TOWN COMMENTS
1	06/05/23	PER TOWN COMMENTS
2	07/28/23	PER TOWN COMMENTS
3	11/10/23	PER TOWN COMMENTS

**WASTEWATER DETAILS**  
**GINGUITE CREEK**  
**6195 N. CROATAN HIGHWAY**  
ATLANTIC TOWNSHIP DARE COUNTY NORTH CAROLINA

PROJECT NO.	P14064
DESIGNED BY	CMS
DRAWN BY	JJC
CHECKED BY	CMS
ISSUE DATE	6/1/23

SHEET NO.  
**10**  
OF 11 SHEETS

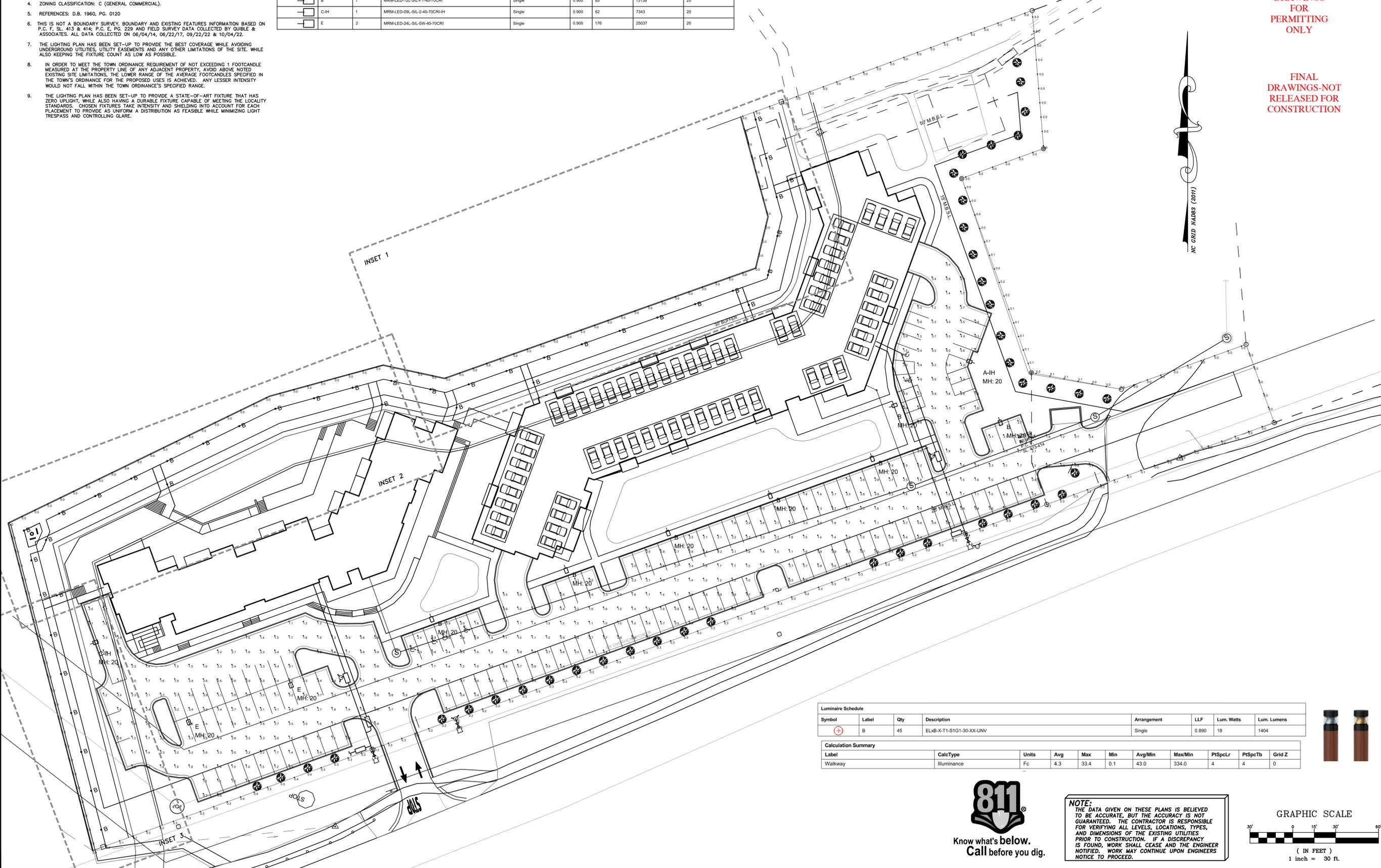
**NOTES:**

- PROPERTY OWNERS: GINGUITE, LLC  
PO BOX 90  
KILL DEVL HILLS, NC 27948
- PROPERTY IDENTIFICATION: 6195 N. CROATAN HIGHWAY  
SOUTHERN SHORES, 27949  
PID#: 022519064  
PIN#: 986606491459
- LOT AREA = 303,239.7 SQ.FT./6.96 ACRES  
NET AREA (NOT INCLUDING SURFACE WATER & COASTAL WETLANDS) =198,177.73 SF / 4.55 AC.  
(AREAS BY COORDINATE METHOD.)
- ZONING CLASSIFICATION: C (GENERAL COMMERCIAL).
- REFERENCES: D.B. 1960, PG. 0120
- THIS IS NOT A BOUNDARY SURVEY. BOUNDARY AND EXISTING FEATURES INFORMATION BASED ON P.C. F. SL. 413 & 414; P.C. E. PG. 229 AND FIELD SURVEY DATA COLLECTED BY QUIBLE & ASSOCIATES. ALL DATA COLLECTED ON 06/04/14, 06/22/17, 09/22/22 & 10/04/22.
- THE LIGHTING PLAN HAS BEEN SET-UP TO PROVIDE THE BEST COVERAGE WHILE AVOIDING UNDERGROUND UTILITIES, UTILITY EASEMENTS AND ANY OTHER LIMITATIONS OF THE SITE. WHILE ALSO KEEPING THE FIXTURE COUNT AS LOW AS POSSIBLE.
- IN ORDER TO MEET THE TOWN ORDINANCE REQUIREMENT OF NOT EXCEEDING 1 FOOTCANDLE MEASURED AT THE PROPERTY LINE OF ANY ADJACENT PROPERTY, AVOID ABOVE NOTED EXISTING SITE LIMITATIONS, THE LOWER RANGE OF THE AVERAGE FOOTCANDLES SPECIFIED IN THE TOWN'S ORDINANCE FOR THE PROPOSED USES IS ACHIEVED. ANY LESSER INTENSITY WOULD NOT FALL WITHIN THE TOWN ORDINANCE'S SPECIFIED RANGE.
- THE LIGHTING PLAN HAS BEEN SET-UP TO PROVIDE A STATE-OF-ART FIXTURE THAT HAS ZERO UPLIGHT, WHILE ALSO HAVING A DURABLE FIXTURE CAPABLE OF MEETING THE LOCALITY STANDARDS. CHOSEN FIXTURES TAKE INTENSITY AND SHIELDING INTO ACCOUNT FOR EACH PLACEMENT TO PROVIDE AS UNIFORM A DISTRIBUTION AS FEASIBLE WHILE MINIMIZING LIGHT TRESPASS AND CONTROLLING GLARE.

Calculation Summary										
Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min	PtSpLr	PtSpTb	Grid Z
Parking Lot	illumiance	Fc	1.9	6.6	0.3	6.4	22.0	10	10	0
Property Line	illumiance	Fc	0.1	0.5	0.0	N.A.	N.A.	10	N.A.	N.A.

Luminaire Schedule								
Symbol	Label	Qty	Description	Arrangement	LLF	Lum. Watts	Lum. Lumens	Mounting Height
⊕	A-IH	1	MRM-LED-18L-SIL-3-40-70CRI-IH	Single	0.900	135	15381	20
⊕	B	7	MRM-LED-12L-SIL-FT-40-70CRI	Single	0.900	85	13138	20
⊕	C-IH	1	MRM-LED-09L-SIL-2-40-70CRI-IH	Single	0.900	62	7343	20
⊕	E	2	MRM-LED-24L-SIL-5W-40-70CRI	Single	0.900	176	25037	20



FINAL DRAWINGS FOR PERMITTING ONLY

FINAL DRAWINGS-NOT RELEASED FOR CONSTRUCTION



NC License# C-0208  
SMCE #59

**Quible & Associates, P.C.**  
Professional Engineers, P.E.  
Professional Surveyors, S.S.  
Professional Environmental Scientists & Surveyors  
4846 CAROLINE HWY  
BLACK MOUNTAIN, NC 28711  
Phone: (828) 652-9127  
Fax: (828) 652-9128  
www.quible.com



REVISIONS

NO.	DATE	PER TOWN COMMENTS
1	06/05/23	PER TOWN COMMENTS
2	07/13/23	ADDED BOARDWALK LIGHTING
3	08/14/23	REVISED PER TOWN
4	11/10/23	ISSUED FOR TOWN REVIEW/PERMITTING ONLY

THIS DOCUMENT IS THE PROPERTY OF QUIBLE & ASSOCIATES, P.C. ANY REPRODUCTION OR TRANSMISSION OF THIS DOCUMENT WITHOUT THE WRITTEN PERMISSION OF QUIBLE & ASSOCIATES, P.C. IS PROHIBITED.

IF THIS DOCUMENT IS NOT SIGNED AND SEALED BY A PROFESSIONAL ENGINEER, SURVEYOR, ENVIRONMENTAL SCIENTIST, OR SURVEYOR, IT SHALL BE CONSIDERED PRELIMINARY AND SHALL NOT BE USED FOR ANY OFFICIAL PURPOSES OR FOR CONSTRUCTION UNLESS OTHERWISE NOTED.

**LIGHTING PLAN**

**GINGUITE CREEK**

**6195 N. CROATAN HIGHWAY**

ATLANTIC TOWNSHIP DARE COUNTY NORTH CAROLINA

PROJECT NO. **P14064**

DESIGNED BY **CMS**

DRAWN BY **JJC**

CHECKED BY **CMS**

ISSUE DATE **6/1/23**

SHEET NO. **11A**

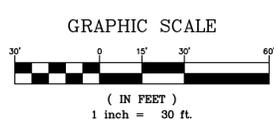
OF 11 SHEETS

Luminaire Schedule							
Symbol	Label	Qty	Description	Arrangement	LLF	Lum. Watts	Lum. Lumens
⊕	B	45	ELx8-X-T1-S1G1-30-XX-UNV	Single	0.890	18	1404

Calculation Summary										
Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min	PtSpLr	PtSpTb	Grid Z
Walkway	illumiance	Fc	4.3	33.4	0.1	43.0	334.0	4	4	0



**NOTE:**  
THE DATA GIVEN ON THESE PLANS IS BELIEVED TO BE ACCURATE, BUT THE ACCURACY IS NOT GUARANTEED. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL LEVELS, LOCATIONS, TYPES, AND DIMENSIONS OF THE EXISTING UTILITIES PRIOR TO CONSTRUCTION. IF A DISCREPANCY IS FOUND, WORK SHALL CEASE AND THE ENGINEER NOTIFIED. WORK MAY CONTINUE UPON ENGINEERS NOTICE TO PROCEED.



C:\Users\j11064\Documents\114064-6195 N. CROATAN HIGHWAY\114064-6195 N. CROATAN HIGHWAY.dwg 11/10/2023 12:28 PM

**NOTES:**

- PROPERTY OWNERS: GINGUITE, LLC  
PO BOX 90  
KILL DEVIL HILLS, NC 27948
- PROPERTY IDENTIFICATION: 6195 N. CROATAN HIGHWAY  
SOUTHERN SHORES, 27949  
PID#: 022519064  
PIN#: 986606491459
- LOT AREA = 303,239.7 SQ.FT./6.96 ACRES  
NET AREA (NOT INCLUDING SURFACE WATER & COASTAL WETLANDS) =198,177.73 SF / 4.55 AC.  
(AREAS BY COORDINATE METHOD.)
- ZONING CLASSIFICATION: C (GENERAL COMMERCIAL).
- REFERENCES: D.B. 1960, PG. 0120
- THIS IS NOT A BOUNDARY SURVEY. BOUNDARY AND EXISTING FEATURES INFORMATION BASED ON P.C. F. SL. 413 & 414; P.C. E. PG. 229 AND FIELD SURVEY DATA COLLECTED BY QUIBLE & ASSOCIATES. ALL DATA COLLECTED ON 06/04/14, 06/22/17, 09/22/22 & 10/04/22.
- THE LIGHTING PLAN HAS BEEN SET-UP TO PROVIDE THE BEST COVERAGE WHILE AVOIDING UNDERGROUND UTILITIES, UTILITY EASEMENTS AND ANY OTHER LIMITATIONS OF THE SITE. WHILE ALSO KEEPING THE FIXTURE COUNT AS LOW AS POSSIBLE.
- IN ORDER TO MEET THE TOWN ORDINANCE REQUIREMENT OF NOT EXCEEDING 1 FOOTCANDLE MEASURED AT THE PROPERTY LINE OF ANY ADJACENT PROPERTY, AVOID ABOVE NOTED EXISTING SITE LIMITATIONS, THE LOWER RANGE OF THE AVERAGE FOOTCANDLES SPECIFIED IN THE TOWN'S ORDINANCE FOR THE PROPOSED USES IS ACHIEVED. ANY LESSER INTENSITY WOULD NOT FALL WITHIN THE TOWN ORDINANCE'S SPECIFIED RANGE.
- THE LIGHTING PLAN HAS BEEN SET-UP TO PROVIDE A STATE-OF-ART FIXTURE THAT HAS ZERO UPLIGHT, WHILE ALSO HAVING A DURABLE FIXTURE CAPABLE OF MEETING THE LOCALITY STANDARDS. CHOSEN FIXTURES TAKE INTENSITY AND SHIELDING INTO ACCOUNT FOR EACH PLACEMENT TO PROVIDE AS UNIFORM A DISTRIBUTION AS FEASIBLE WHILE MINIMIZING LIGHT TRESPASS AND CONTROLLING GLARE.

Luminaire Schedule							
Symbol	Label	Qty	Description	Arrangement	LLF	Lum. Watts	Lum. Lumens
⊕	B	45	ELXB-X-T1-S1G1-30-XX-UNV	Single	0.890	18	1404

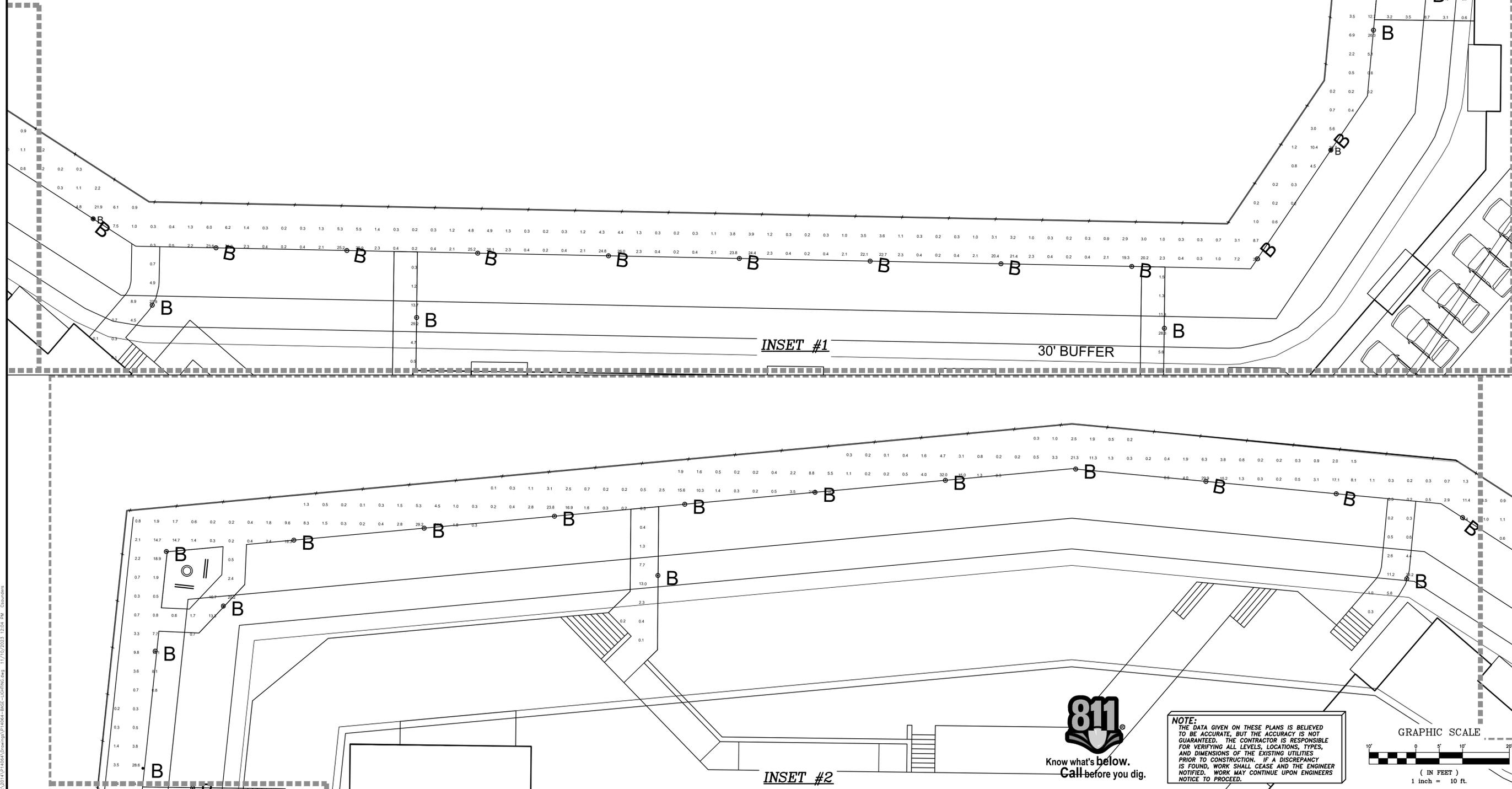
  

Calculation Summary										
Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min	PISpcLr	PISpcTb	Grid Z
Walkway	Illuminance		4.3	33.4	0.1	43.0	334.0	4	4	0



FINAL DRAWINGS FOR PERMITTING ONLY

FINAL DRAWINGS-NOT RELEASED FOR CONSTRUCTION



NC License# C-028  
SWCE 1959  
**Quible & Associates, P.C.**  
ENGINEERING SURVEYING  
ENVIRONMENTAL SCIENCES SURVEYING\*\*  
8486 CAROLINA HWY. 90 CHURCH STREET  
BLACK MOUNTAIN, NC 27686  
PHONE: (828) 859-9427  
FAX: (828) 859-9428

**NORTH CAROLINA PROFESSIONAL SEAL**  
10/10/2023  
ALEX M. SAUNDERS  
CERTIFICATION

THIS DOCUMENT IS THE PROPERTY OF QUIBLE & ASSOCIATES, P.C. ANY REPRODUCTION OR TRANSMISSION OF THIS DOCUMENT WITHOUT THE WRITTEN PERMISSION OF QUIBLE & ASSOCIATES, P.C. IS PROHIBITED.  
IF THIS DOCUMENT IS NOT SIGNED BY A PROFESSIONAL ENGINEER OR SURVEYOR, IT SHALL BE CONSIDERED PRELIMINARY AND SHALL NOT BE USED FOR CONSTRUCTION OR LAND CONVEYANCE UNLESS OTHERWISE NOTED.

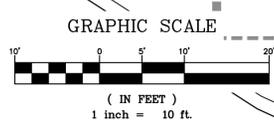
REVISIONS	
NO.	DATE
1	06/05/23
2	07/13/23
3	08/14/23
4	11/10/23

**LIGHTING PLAN**  
**GINGUITE CREEK**  
**6195 N. CROATAN HIGHWAY**  
ATLANTIC TOWNSHIP DARE COUNTY NORTH CAROLINA

PROJECT NO. P14064  
DESIGNED BY CMS  
DRAWN BY JJC  
CHECKED BY CMS  
ISSUE DATE 6/1/23  
SHEET NO. **11B**  
OF 11 SHEETS

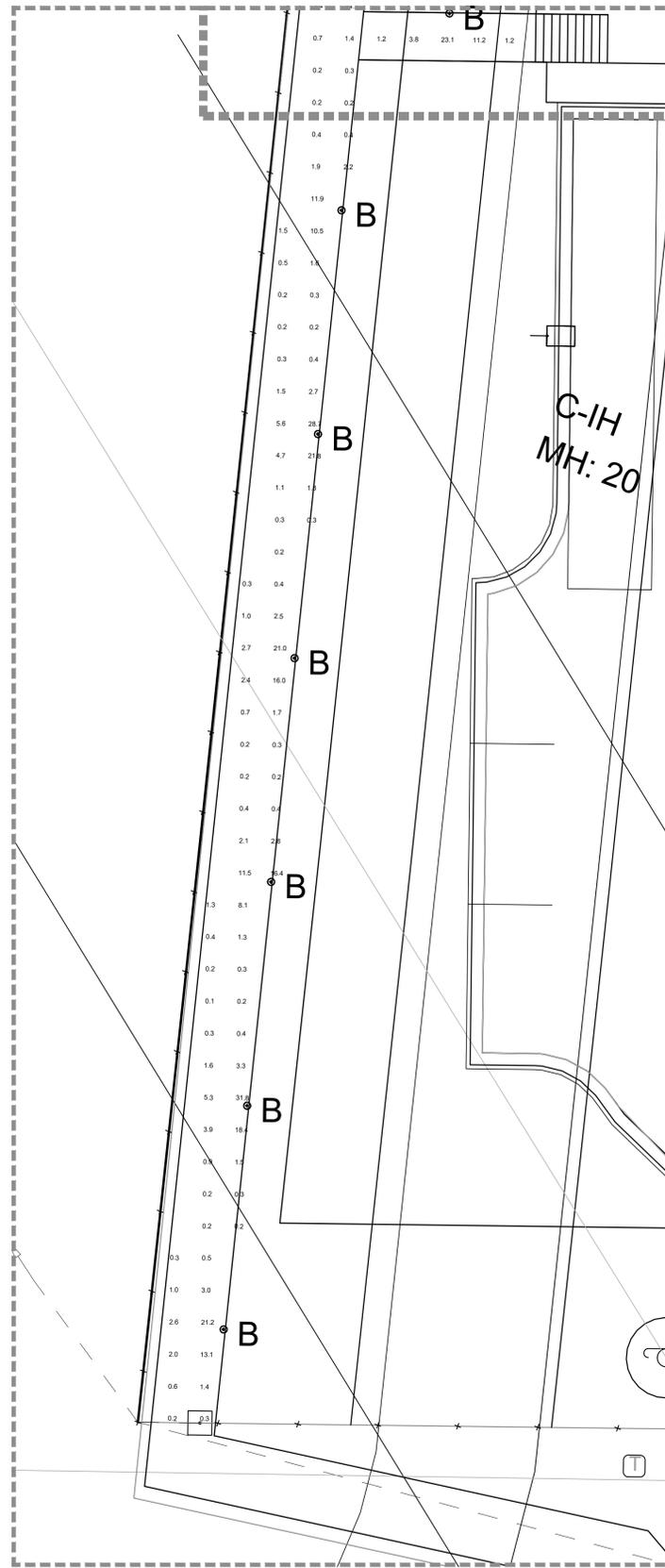


**NOTE:**  
THE DATA GIVEN ON THESE PLANS IS BELIEVED TO BE ACCURATE, BUT THE ACCURACY IS NOT GUARANTEED. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL LEVELS, LOCATIONS, TYPES, AND DIMENSIONS OF THE EXISTING UTILITIES PRIOR TO CONSTRUCTION. IF A DISCREPANCY IS FOUND, WORK SHALL CEASE AND THE ENGINEER NOTIFIED. WORK MAY CONTINUE UPON ENGINEERS NOTICE TO PROCEED.



**NOTES:**

- PROPERTY OWNERS: GINGUITE, LLC  
PO BOX 90  
KILL DEVL HILLS, NC 27948
- PROPERTY IDENTIFICATION: 6195 N. CROATAN HIGHWAY  
SOUTHERN SHORES, 27949  
PID#: 022519064  
PIN#: 986606491459
- LOT AREA = 303,239.7 SQ.FT./6.96 ACRES  
NET AREA (NOT INCLUDING SURFACE WATER & COASTAL WETLANDS) =198,177.73 SF / 4.55 AC.  
(AREAS BY COORDINATE METHOD.)
- ZONING CLASSIFICATION: C (GENERAL COMMERCIAL).
- REFERENCES: D.B. 1960, PG. 0120
- THIS IS NOT A BOUNDARY SURVEY. BOUNDARY AND EXISTING FEATURES INFORMATION BASED ON P.C. F. SL. 413 & 414; P.C. E. PG. 229 AND FIELD SURVEY DATA COLLECTED BY QUIBLE & ASSOCIATES. ALL DATA COLLECTED ON 06/04/14, 06/22/17, 09/22/22 & 10/04/22.
- THE LIGHTING PLAN HAS BEEN SET-UP TO PROVIDE THE BEST COVERAGE WHILE AVOIDING UNDERGROUND UTILITIES, UTILITY EASEMENTS AND ANY OTHER LIMITATIONS OF THE SITE. WHILE ALSO KEEPING THE FIXTURE COUNT AS LOW AS POSSIBLE.
- IN ORDER TO MEET THE TOWN ORDINANCE REQUIREMENT OF NOT EXCEEDING 1 FOOTCANDLE MEASURED AT THE PROPERTY LINE OF ANY ADJACENT PROPERTY, AVOID ABOVE NOTED EXISTING SITE LIMITATIONS, THE LOWER RANGE OF THE AVERAGE FOOTCANDLES SPECIFIED IN THE TOWN'S ORDINANCE FOR THE PROPOSED USES IS ACHIEVED. ANY LESSER INTENSITY WOULD NOT FALL WITHIN THE TOWN ORDINANCE'S SPECIFIED RANGE.
- THE LIGHTING PLAN HAS BEEN SET-UP TO PROVIDE A STATE-OF-ART FIXTURE THAT HAS ZERO UPLIGHT, WHILE ALSO HAVING A DURABLE FIXTURE CAPABLE OF MEETING THE LOCALITY STANDARDS. CHOSEN FIXTURES TAKE INTENSITY AND SHIELDING INTO ACCOUNT FOR EACH PLACEMENT TO PROVIDE AS UNIFORM A DISTRIBUTION AS FEASIBLE WHILE MINIMIZING LIGHT TRESPASS AND CONTROLLING GLARE.



**INSET #3**

**FINAL  
DRAWINGS  
FOR  
PERMITTING  
ONLY**

**FINAL  
DRAWINGS-NOT  
RELEASED FOR  
CONSTRUCTION**

NC License# C-028  
SWICE 1959  
**Quible & Associates, P.C.**  
ENGINEERING, ARCHITECTURE, SURVEYING  
ENVIRONMENTAL SCIENCES SURVEYING\*\*  
8486 CAROLINE HWY. 90 CHURCH STREET  
POWELL POINT, NC 27966 BLACK MOUNTAIN, NC 28711  
Phone: (252) 891-8127 Fax: (252) 891-8128  
www.quibleandassociates.com

**NORTH CAROLINA**  
Professional Seal  
ALEX M. SAUNDERS  
Professional Engineer  
No. 043652  
CERTIFICATION

COPYRIGHT © 2023  
QUIBLE & ASSOCIATES, P.C.  
THIS DOCUMENT IS THE PROPERTY OF QUIBLE & ASSOCIATES, P.C. ANY ALTERATION OR REPRODUCTION IS PROHIBITED.  
IF THIS DOCUMENT IS NOT SIGNED PROFESSIONALLY BY THIS DOCUMENT, IT SHALL BE CONSIDERED PRELIMINARY. NO SHALL NOT BE USED FOR ANY OTHER PURPOSES WITHOUT THE WRITTEN CONSENT OF QUIBLE & ASSOCIATES, P.C. UNLESS OTHERWISE NOTED.

NO.	DATE	REVISIONS
1	06/05/23	PER TOWN COMMENTS
2	07/13/23	ADDED BOARDWALK LIGHTING
3	08/14/23	REVISED PER TOWN
4	11/10/23	ISSUED FOR TOWN REVIEW/PERMITTING ONLY

**LIGHTING PLAN**  
**GINGUITE CREEK**  
**6195 N. CROATAN HIGHWAY**  
ATLANTIC TOWNSHIP DARE COUNTY NORTH CAROLINA

PROJECT NO.	P14064
DESIGNED BY	CMS
DRAWN BY	JJC
CHECKED BY	CMS
ISSUE DATE	6/1/23

SHEET NO.  
**11C**  
OF 11 SHEETS



**NOTE:**  
THE DATA GIVEN ON THESE PLANS IS BELIEVED TO BE ACCURATE, BUT THE ACCURACY IS NOT GUARANTEED. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL LEVELS, LOCATIONS, TYPES, AND DIMENSIONS OF THE EXISTING UTILITIES PRIOR TO CONSTRUCTION. IF A DISCREPANCY IS FOUND, WORK SHALL CEASE AND THE ENGINEER NOTIFIED. WORK MAY CONTINUE UPON ENGINEERS NOTICE TO PROCEED.

